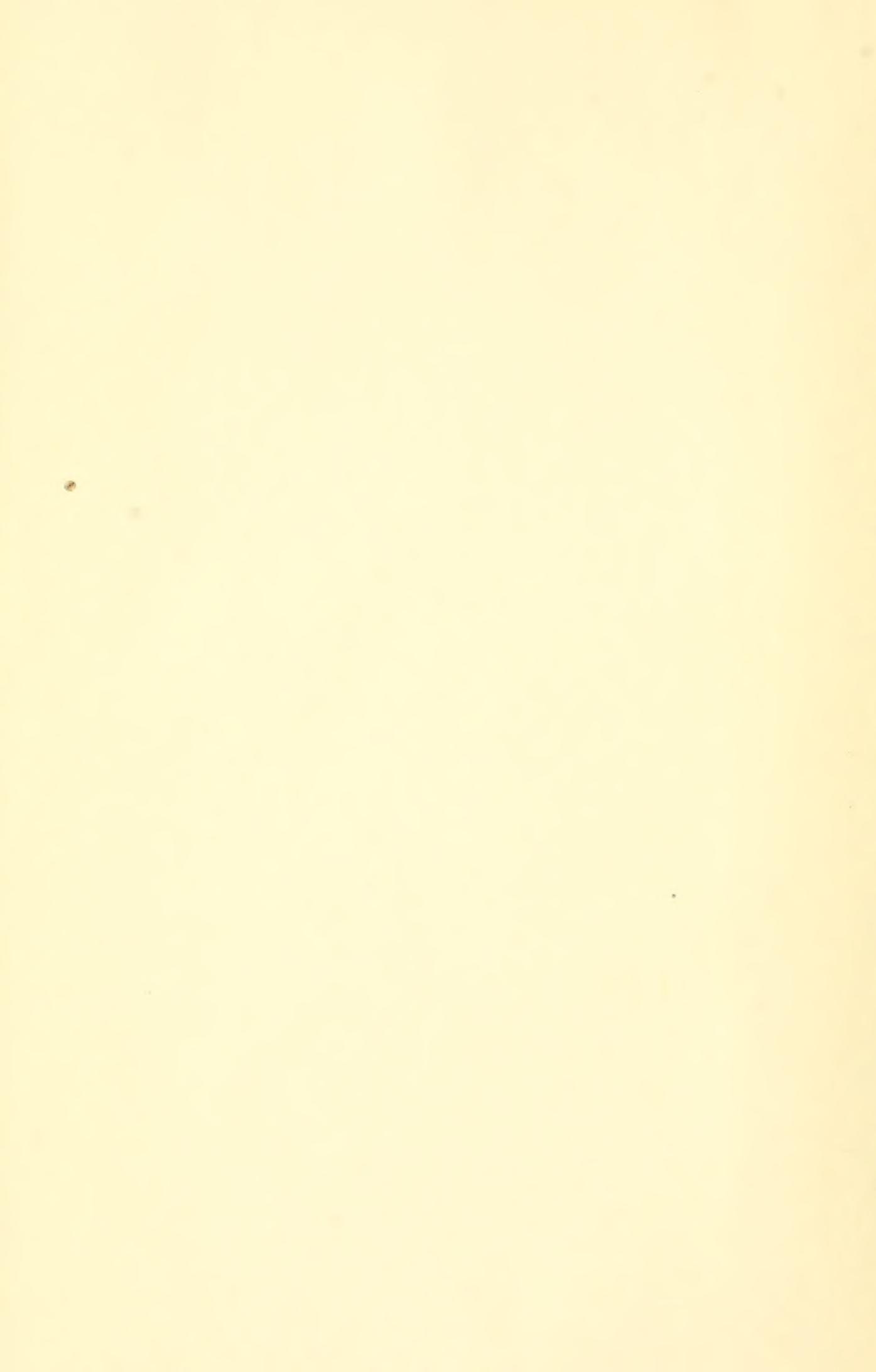


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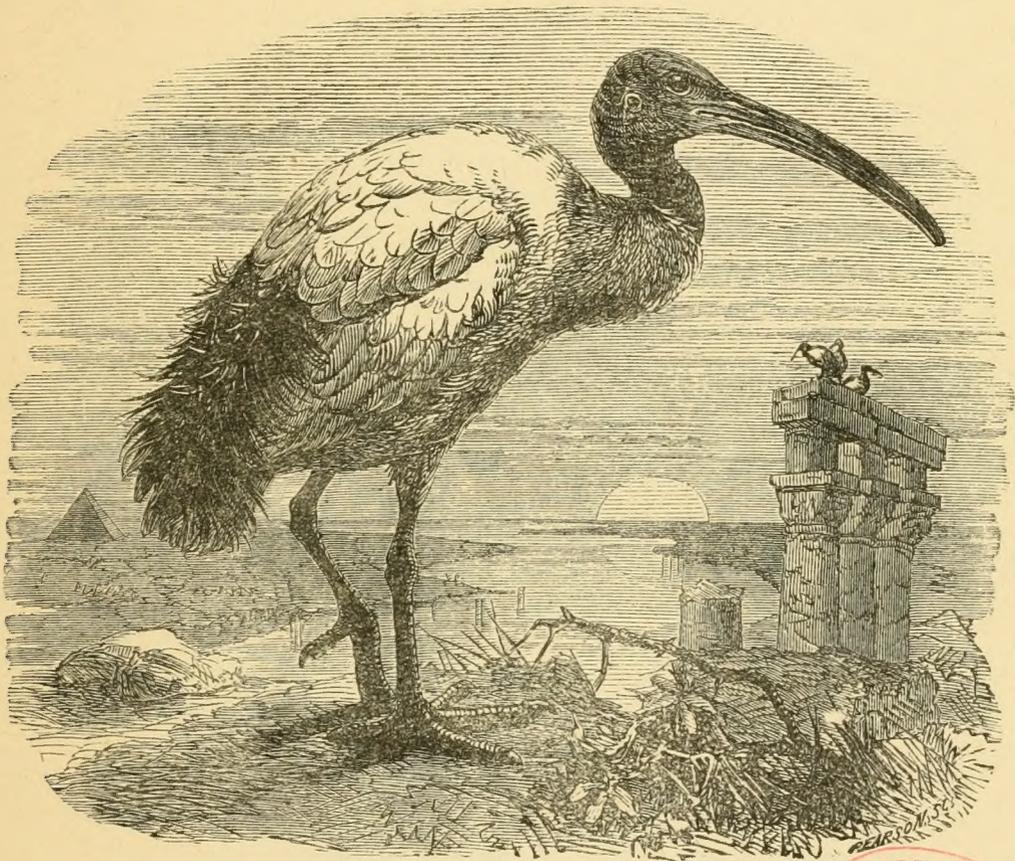
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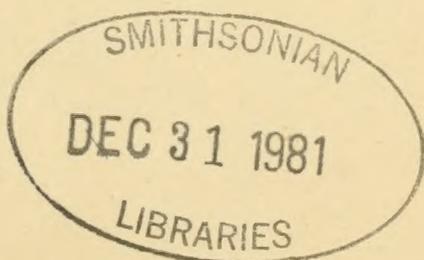
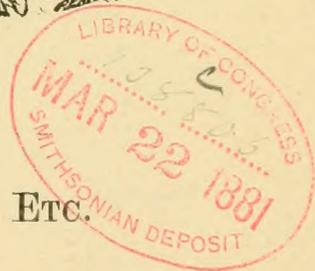
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SIR ANDREW SMITH'S
MISCELLANEOUS
ORNITHOLOGICAL PAPERS.



EDITED BY
OSBERT SALVIN, M.A., F.R.S., ETC.

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INTRODUCTION.

FEW papers are less accessible to ornithologists than those published by the late Sir Andrew Smith prior to the issue of his great work "Illustrations of the Zoology of South Africa." The *South African Quarterly Journal**, wherein most of them appear, is a collection of miscellaneous papers in octavo, issued in two series by the South African Institution between the years 1830 and 1834. The first series contains five numbers, the first four bearing the date 1830, and the fifth 1832. The second series commenced in 1833 with one number divided into three parts; three more numbers of three parts each appeared in 1834 when the journal ceased.

Printed, and for the most part published as this

* The *South African Quarterly Journal*. No. I., From October 1829, to January 1830. Edited at the South African Institution. Cape Town: Published by W. Bridekirk, Heeregracht: and by J. M. Richardson, 23, Cornhill, London. 1830. Price, Three shillings.

No. II. From January to April, 1830.

No. III. From April to July, 1830.

No. IV. From July to September, 1830.

No. V. October, 1831. Published by George Greig, Keizersgracht; 1832.

The *South African Quarterly Journal*. Second series. No. 1. October to December, 1833. Edited at the South African Institution, Published in monthly parts. Part i. (part ii., part iii.). Cape Town: Printed and Published by George Greig, Keizersgracht, 1833.

No. 2. January to March, 1834, part i., 1834, part iii. (err. for part ii.) part iii. Printed and published by George Greig, Heeregracht.

No. 3. April to June. Part i., part ii., part iii.

No. 4. July to September. Part i., part ii., part iii.

journal was, at Cape Town, it has now become very scarce, and few complete copies are preserved in libraries at the present time. That from which this reprint has been prepared is in the possession of Professor Newton, and is the one referred to by him in *The Ibis* for 1868, p. 502.

In the present volume we have reprinted the ornithological portion only of Sir A. Smith's papers, as they alone immediately concern us. The *South African Quarterly Journal*, however, contains many notes by him on the Mammals of South Africa besides other subjects.

In 1834 Sir A. Smith undertook the superintendence of an expedition for exploring Central Africa at the instance of "The Cape of Good Hope Association for Exploring Central Africa," and on his return published a report of his journey.*

In an Appendix to this Report a number of mammals and birds are described for the first time, and the matter relating to the latter we reproduce here.

No less than 3379 "skins of new and rare birds" were obtained during the expedition, and at a General Meeting of the Members of the Association, held on the 19th March, 1836, Sir John Herschell in the chair, it was resolved, amongst other things, that the rarer part of the collections should not be disposed of by public sale until they had been examined and described, and a committee was appointed to carry out this resolution. This committee resolved, on 23rd March, to reserve the more valuable and interesting portions of the collections for exhibition in Europe, and many of the specimens were stuffed by "Mr. Verreaux of Cape Town" for that purpose.

* Report of the Expedition for Exploring Central Africa, from the Cape of Good Hope, June 23, 1834, under the superintendence of Dr. A. Smith. Published for the subscribers only. Printed at the Government Gazette Office, Grave Street, Cape Town. 1836.

This led to the formation of the "South African Museum," exhibited at the Egyptian Hall, Piccadilly, London, during the year 1837 and part of 1838, a catalogue of which was published in the former year.*

Notes chiefly on the mammals, but also on a few of the birds exhibited are given in this catalogue, and several names without descriptions of the latter appear in it. But the pamphlet is without scientific interest. Its authorship is usually attributed to Sir A. Smith, but his name does not appear in connection with it.

On the 6th June, 1838, and two following days this collection was sold by auction in 559 lots and dispersed. A sale catalogue is amongst the books presented by Mrs. Strickland to the University of Cambridge.†

Of the specimens obtained by Sir A. Smith, a considerable number found their way to the British Museum, others came into the possession of the late P. J. Selby and of H. E. Strickland, both of whose collections are now at Cambridge; others, again, we believe, passed into the hands of the late Sir W. Jardine. These skins may be usually distinguished by their flat form and by a brown paper label with a number on it attached to one of the legs.

* A Catalogue of the South African Museum, now exhibiting in the Egyptian Hall, Piccadilly, the property of a Society entitled "The Cape of Good Hope Association for Exploring Central Africa." This catalogue may be had at the Hall; or of Smith, Elder, and Co., 65, Cornhill, 1837. Price one shilling.

† Egyptian Hall, Piccadilly. A Catalogue of the South African Museum, the property of a Society, entitled "The Cape of Good Hope Association for exploring Central Africa," which will be sold by Auction, by Messrs. J. C. and S. Stevens, at the Egyptian Hall, on Wednesday, the 6th day of June, 1838, and two following days, at twelve for one o'clock, in pursuance of a resolution passed by the above Society. May be viewed on Monday and Tuesday prior to the sale and catalogues (1s. each, to admit a party) to be had at the Hall, and of Messrs. J. C. and S. Stevens, 38, King-street, Covent Garden.

Besides Sir A. Smith's papers from the *South African Quarterly Journal* we have added the only other original ornithological paper contained in it. This is by Jules Verreaux, wherein three species of birds are described, p. 66 of this reprint.

This volume is numbered in brackets consecutively at the foot of each page, and the index at the end of the volume refers to this number. Each article is headed with the number of the journal in which it appeared, and the number at the head of the page gives the original pagination.

O. S.

Cambridge, September, 1880.

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[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
No. I., OCT. 1829 to JAN 1830.]

A Description of the Birds inhabiting the South of Africa. By ANDREW SMITH, M.D. Member of the Wernerian Natural History Society of Edinburgh; Honorary Member of the Mineralogical Society of Jena; and Corresponding Member of the Zoological and Horticultural Societies of London.

FOR the botanist, South Africa has long formed a favorite retreat, and has been one of the sources from whence he has for years past been accustomed to gather many of the finest and rarest productions of the vegetable kingdom. Fashion, together with such decided liberality towards that the least offensive of nature's departments, have tended hitherto to maintain the superiority so much in favor thereof, that the riches of the other kingdoms have, in a great measure, been overlooked. Indeed, were it not for the writings of the indefatigable and accurate Le Vaillant, the world would scarcely have yet the means of ascertaining whether life existed there in any other form than that in which it occurs in plants. The revolutions which have lately taken place in the scientific world, or, at least, in a part thereof, give us reason now to hope that inquiry will be more divided and equalized, and that every branch will receive that degree of consideration which their common origin equally demands from those who are ambitious of understanding the general scheme of creation.

The naturalist who selects Southern Africa for the site of his exertions, can scarcely err in the choice of a department, as all are prolific in the extreme, and it is only by the observer who is unacquainted with the characters of diversities, that any thing like limitation or deficiency can be experienced. The native quadrupeds already known amount to a very considerable number, but are yet imperfectly described, particularly the smaller species. Of such also there is scarcely a part of the country that does not still contain nondescripts, and we have only to observe where vegetable or animal productions occur of a description different to those we have found constituting the food of species already known, to enable us to extend discovery. Solitary changes appear inconsistent with the design of nature, so that whenever a novelty is discovered it follows almost as a matter of course, that others exist upon which the one or the other depends. Thus a change in the character of vegetation is generally attended with a change in the insect tribes, and a change of those again with a corresponding one in the smaller quadrupeds or birds.

In the feathered race the variety is still more conspicuous, and, taking Temminck as a guide in estimating the number of European birds, it will suffice to support our conclusion, simply to state that within the British colony at the Cape of Good Hope, there are to be found at least one hundred more species of birds than in the whole of the quarter of the globe he alludes to. The plumage of those in our domain cannot certainly be held out as in general particularly splendid, yet at the same time there are not wanting instances of great beauty; but if the diversity and adaptation of characters and instincts in the various individuals be only considered, there will be found sufficient to entice and engage attention without the really less important and interesting commendation, that of fine feathers. In the class of reptiles, here are the means of making numerous additions to science; not only as regards the description of non-descript species, but also as to classification. The diversity of forms under which they occur, and the peculiar characters and habitats which each variety appears to maintain, furnish good hints for divisions; and, if such alone be regarded, they will enable the naturalist to decide upon proper positions, without direct reference to formation, though that will be found upon inquiry, to support the conclusions deduced from such like observations. Hence exist two methods of arranging the objects of animated nature, and whether the one or the other, or both, be followed, the conclusions of the accurate observer will, I am convinced, be the same.

Of insects there are a very great variety, and the principal portion of them is marked by much beauty of coloring, as well as by numerous interesting characters. From the huge elephant to the smallest flower, all here furnish the entomologist with specimens, and there is scarcely an object upon which he can cast his eye, or to which he can direct his research, that will not supply him with the means of increasing his collection. Besides this extreme multiformity in the land productions, the ocean is not less prolific, and to survey the variety of fishes and other marine productions which present themselves in our seas and about our shores, is almost enough to petrify exertion, and generate a belief of the impossibility of ever unravelling all the mysteries of creation. Let us, however, take spirit and console ourselves in knowing that if we do but little, that little will assist in rendering the labour of our successors less difficult, and will concur towards illustrating the beauty and wisdom, connection and dependence, which a thorough knowledge of the animal kingdom will doubtless one day display. The results, upon such being attained, will prove the utility of the study, and will doubtless dispense knowledge and benefits to society of which we cannot at pre-

sent even form the slightest conception. The study of nature, as a popular author* remarks, even when viewed apart from science, "is one of the most pleasing occupations that can engage the attention of reasonable beings. The naturalist reflects upon hidden things, investigates by comparison, and testifies by experience. Perhaps none of the amusements of human life are more satisfactory than the investigation and survey of the workings and ways of Providence in this created world of wonders, filled with his never absent power. The study of nature occupies and elevates the mind, is inexhaustible in supply, and, while it furnishes meditation for the closet of the studious, gives to the reflections of moralizing rambles admiration and delight, and is an engaging companion that will communicate an interest to every rural walk." Such then entitles the birds of South Africa as a portion of the grand system to a share of our consideration, and to them I shall now proceed.

Ordo I. RAPTORES. Ill.

Fam. VULTURIDÆ.

Caput collum que plus minusve nuda ; rostrum præcipue forte, ad apicem aduncum basè lati cerigerum glabrum aut pilorum, simplex aut carunculatum, nares laterales in ceromate positæ, ovales, interdum, elongatæ, plerumque apertæ ; pedes nudæ ; tarsi reticulati. Digni externi membrano connexi. Ungues validi subincurvi vix retractiles.

Head and neck more or less divested of feathers ; bill very strong, hooked at the point, and with a broad cere at the base, which is either bald or hairy, simple or carunculated ; nostrils lateral, situated in the cere, sometimes elongated, for the most part open ; feet naked ; tarsi reticulated ; outer toes connected by membrane ; claws strong, slightly curved, and scarcely retractile.

Genus. VULTUR. Auct.

<i>Caput collum que implumes ; rostrum basi rectum, supra convexum, haud carunculatum. Nares transversæ, basales ; pedes fortes.</i>		Head and neck naked ; beak straight at the base ; convex above and without caruncles. Nostrils transverse and basal ; feet strong.
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1. VULTUR FULVUS.—White Assvogel of the Colonists.

Vultur fulvus Gmel. Syst. 1, p. 249, sp. 11.—Vultur Leucocephalus Meyer Tasschenb Deut. v. 1, p. 7.—Vultur percnopterus Daud. Ois, v. 2, p. 13, sp. 7.—V. trencalos, Bech. Naturg Deut. v. 2, p. 479, sp. 2.—Le Perenoptere Buff. Ois,

* The Journal of a Naturalist, page 51.

v. 1, *p.* 149, *pl. enl.* 426.—Le Griffon *Buff. Ois*, *v.* 1, *p.* 151, *tab.* 5.—Savigny *Syst. d. Ois d'Eq.* *p.* 11.—Vultur Kolbii *Lath. Ind. Orn. Supp. vol. 2*, *p.* 1.—Le Chassefiente *Le Vaill. Ois d'Afriq. vol. 1*, *pl.* 10.

V. griseus seu albus, *capute nuchaque setis subalbidis tectis; parte inferiore cervicis nuda, remigibus primioribus nigris, secundariis præcipue subgriseis; rectricibus nigris griseo umbratis, rostro, pedibus que lividis; unguibus nigris; oculis subrutilis.*

Head and nape covered with dirty short whitish hairs, or bristles; lower part of cervix bare, and of a bluish colour; lower part of throat, and middle of breast, covered with short bristly grayish brown feathers; rest of throat, sides of neck, and upper part of cervix, with fine whitish down, and bristles resembling those of the head. Skin, as seen through these coverings, between livid blue and purple; lower part of neck behind with a frizzy ruff of short white feathers; plumage of upper and under parts white, or a pale blossom color; primary quill feathers black; secondaries grayish, shaded with black towards their vanes; tail rounded, and composed of fourteen black feathers, tinted with gray. Bill, legs, and toes, livid blue, with shades of dirty green; claws black; eyes light yellowish red; length from three feet, to three feet six inches; breadth from tip to tip of wings, about eight feet. The feathers of the back, shoulders, breast, belly and legs, have their tips rounded or semicircular. The male and female are of the same colour, and the latter considerably exceeds the former in size.

Young.—During the first year the prevailing color is dark brown, variegated by narrow longitudinal streaks of light reddish yellow or pale fulvous, one along the centre of each feather; the head is covered with a dusky white down, as is likewise the upper part of the cervix and sides of the neck; the throat and centre of the breast are dark brown; the primary and secondary quills, together with the tail, are brownish black; the bill and legs are blackish; the eyes are dark brown, and the skin of the head is a dirty sulphur yellow. The ruff on the back of the neck is distinctly marked, and composed of long, narrow, pointed, soft, and silky brown feathers, many of which are re-curved towards the head. After the first moulting, the plumage, which is that of the second year, is considerably lighter in color, and commonly the centres of all the feathers, but particularly of the breast and belly are much less dark than the other parts thereof. From this stage each successive annual change is marked by a diminution of the depth of the color; yet, nevertheless, it requires several years to pass from the tint of the first feathers to that of the faint issabella hue, which announ-

ces the approach of maturity. As age advances, the front, and from that the head, become covered with hair, and about the time when the white feathers begin to make their appearance, the last named part, and more or less of the neck, exhibit the mixed coating alluded to in speaking of the old bird.

Obs.—Having never had an opportunity of comparing the species just described with specimens of the *Vultur Fulvus* of Europe, I follow the example of the illustrious Temminck* in viewing them as identical. At the same time however, it must be acknowledged, that a variety of circumstances concur to create doubts as to the justness of the conclusion; such as—In the Cape bird, the eyes in adult specimens, are light reddish or reddish yellow, in those of Europe, as stated by the author just mentioned,† they are hazel; in ours the cere is livid, in his it is flesh colored; in ours the extreme length rarely exceeds three feet eight inches, in his it usually measures four feet; in ours the centre of the breast is covered with short grayish brown feathers, in his with white down; in ours the head is covered with a dirty dusky hair, in his with short white down. In our young specimens the color is dark brown, with reddish yellow variegations, in his a very clear tawny, with grayish white blotches, or sometimes pure white tints. The *Chassfiente* of Levaillant,§ is certainly an immature example of the Cape species, and in or near that stage in which the greatest number of South African specimens are obtained.

Its food consists of carrion and offal of every description, and thus often life can scarcely be said to have left an animal before it is consumed by a flock of Vultures. They build their nests in crevices of rocks, lay one or two eggs, and occur in great abundance throughout the whole of the South of Africa.

2. VULTUR AURICULARIS.—*Zwarte Aasvogel of the Colonists.*

Vultur Auriculatus, *Shaw's Zoology*, vol. 1, p. 24. *V. Ponticerianus*, *Shaw*, vol. 7, p. 25, pl. 10, *Temminck*, *planch*, vol. 2. *L'Oricou Le Vaill.* tom. 1, pl. 1.

V. fuscus seu nigrofuscus; collo nudo, cute auriculari producta torque cervicali, purpuria aut rubra.

Bill strong; tip of upper mandible yellow; rest of that and the lower greenish yellow or horn color; cere bluish; eyes dark brown; skin of head, and unfeathered portion of neck, vermilion or livid purple, with white variegations; the head thinly covered with a brownish white down and some black

* *Manuel d'Ornithologie*, tom. 1, fol. 6, seconde edition.

† *Ib.*

§ *Les Oiseaux d'Afrique*, par M. le Vaillant, tom. 1, fol. 44.

hairs; the neck bare, or with a still more scanty covering of the like materials; and on each side thereof a thin fold of loose skin, extending downwards and forwards several inches below the ears, usually about one inch in breadth, and similar in color to the head. Throat, and middle of breast, covered with fine short black feathers; back of neck with a ruff of long narrow coarse brownish feathers, many of which are turned forwards; lower part of cervix, back, and shoulders, dark brown, many of the feathers margined with a lighter tint; quills and tail black, with the latter consisting of twelve feathers. Under parts brownish black, the feathers long, narrow, somewhat curved, and broadly edged with white towards their bases, and narrowly with dirty light brown elsewhere; thighs with a few brownish feathers on their outer sides, but their principal covering is a fine reddish brown down; legs and toes pale bluish, with a tinge of green; claws dark horn coloured, inclined to black; length about three feet four or six inches; expanse of wings ten feet. In this species the back and shoulders are generally mottled by an intermixture of white feathers, having the tips more or less semicircular,* which circumstance, together with the other feathers being to a certain extent pointed, renders it probable that the plumage of the mature bird is nearly all white, and that the specimen seen by Burchell† was one of the present species in that stage.

Young.—In immature specimens the bill is more of a dark horn colour; the eyes are a more deep brown; the upper part of the head and neck have a more dense coating of brownish white down; the throat, and centre of the breast, are nearly the same at all ages; the color of the skin, neck, and auricles is less bright, and the latter are rather smaller. The back of the neck is without the ruff, at least the feathers are not longer there than elsewhere, though a little more frizzy; the plumage above is dark brown, the feathers edged and tipped with dirty rufous; the quills and tail are of a less dense black than in aged specimens; the feathers of the breast and belly are narrower and straighter, of a lighter tinge, and with the edges and tips of a dirty light brownish white; the thighs are covered with a whitish down;‡ the legs and toes are of a fainter bluish green, and the claws are more horn coloured. Before the feathers appear, the bird is covered

* Having observed that a change in the form of the tips of feathers usually takes place in various Vultures, and other birds of prey, at times when they are in their most vigorous and perfect state, I am inclined to believe that, eventually, such will enable us to discriminate between mature and immature specimens; at least, of certain genera.

† Burchell's Travels in South Africa, vol. 2, page 194.

‡ The color of the down of the legs seems to vary without any regular rule, and, therefore, requires more observation in order to decide in what stage, or in what sex, it exhibits the one hue or the other.

with a fine, short, white down, which never leaves the breast and belly.

This species builds its nest sometimes in trees, and at other times in rocks, lays one or two eggs, and that in the months of October or November. It occurs throughout the whole of South Africa, but much less abundantly than the last described, and though considerably superior in size to it, is, nevertheless, inferior in point of courage and strength. It is often seen where carrion exists, yet rarely ventures to approach thereto, till those of the other species have deserted it, which happens only when they are satiated, or the flesh becomes putrid and very scanty.

3. VULTUR OCCIPITALIS. *Burchel*.*

Corpus supra fusco-nigrum subtus album. Caput lanugine alba tectum occipitali reversa. Colli pars superior nuda posterior plumis patentibus nigris et anterior depressis brevissimis albis tectæ. Remiges rectrices que nigrae; rachidibus supra nigris subtus albis. Tibiæ (femora) plumis albis dense vestitæ rostrum et pedes incarnata. Orbita denudata colli pars et cera alba, ungues nigri. Lingua brevis integra apice rotundata basi sagittata laciniata.

Bill and feet flesh coloured; bare part round the eyes white; irides of the color of burnt umber; top of the head covered with a white feathery wool, which, at the back part, is longer and stands in a reversed position. Color above blackish brown, but the thighs, and under parts of the body and neck are white; quill feathers, and those of the tail black. The part of the neck which is bare, together with the base of the beak, white; the expanse of the wing is seven feet.

A Vulture of a different species to either of the two first described, is not unfrequently met with in the northern and eastern parts of the colony, and though I have often seen examples thereof, yet I have never been able to procure one for examination. From the description of the species procured by Burchel† in the Bechuana country, I am inclined to believe it is identical with the one under consideration, and, from the lack of a more detailed description, I have introduced his mostly in his own words. Were I satisfied that the species to which Burchel's trivial name is applied by Rupell,‡ was the same, I should have no difficulty in supplying from the description of the latter, whatever might be wanting in that of the former. But, as the reverse is the case, I shall, until such time as I have an opportunity of comparing the characters of the South African species, consider the two as distinct.

* Burchel's Travels in South Africa, vol. 2, page 329.

† *Ib.*

‡ Atlas zu der Reise im Nordlichen Afrika von Eduard Rupell, erste Abtheilung Zoologie, page 33, tal. 22.

Genus. NEOPHRON. *Savigny.*

*Caput anterius nudum ; col-
lum plumosum, rostrum per-
gracile elongatum, mandibula
inferiore deorsum curvata go-
nyde nullo. Nares longitudi-
nales, ovales antrorsum spec-
tantes ; remex, 3tia. longissima,
rectrices quatuordecem.*

Anterior part of head naked ;
neck feathered ; bill slender
elongated ; lower mandible in-
clined downwards, without go-
nys. Nostrils longitudinal,
oval, directed forwards ; third
quill feather longest ; tail com-
posed of fourteen feathers.

Vultur *Lin. Lath. Gin.* Gypaetos *Bechstein.*—Cathartes
Meyer, Temminck.—Peronopterus *Cuvier.*—Catharista *Vieillot.*

1. NEOPHRON AEGYPTIACUS. *Sav.*—*Witte Kraai of the Colonists.*

Vultur *Peronopterus Gm. Syst.* 1. 249, *sp.* 7. *Lath.*—Vultur
Leucocephalus Lath. Ind. orn. v. 1. sp. 2.—L'Ourigourap. *Vaill.*
Ois. d'Afrique, pl. 14.—Le Peronoptere. *Cuv. Reg. Animal, v. 1.*

*V. albus ; remigibus nigris ; crista occipitali, cauda albida,
cuneata.*

Bill horn coloured ; cere, forehead ; space round the eyes ;
cheeks, ears, chin, and part of the throat bare, and of a yellow
or saffron color ; eyes light reddish brown ; plumage white,
usually tinted with yellow ; feathers of nape narrow, elongated,
and pointed ; primary quill feathers black ; secondaries gray-
ish black, with the outer vanes more or less broadly margined
with white ; tail fan shaped, and pure white ; legs and toes
dirty greenish white, sometimes inclined to reddish yellow ;
claws dark horn coloured ; length, from one foot ten to two feet
two ; expanse of wings about five feet. The female is a little
larger than the male, but of the same color.

Young.—The prevailing color varies between a black and a
brown. In all the specimens I have yet seen, the feathers of
the neck, particularly of the cervical portion, have been of a
deep black tinge, and of a long narrow pointed form. Those
of the shoulders and interscapular region blackish brown,
with, in some instances, chesnut coloured spots towards tips ;
and in others, large whitish or grayish red blotches. The
back and rump feathers are usually of a lighter tint than the
parts just mentioned, and the breast and belly vary, being
brown, rufous brown, or blackish brown in different speci-
mens. The crown of the head, and the skin and upper part of
the breast, when the bird has just acquired its feathers, are
covered with a dirty whitish down, and that becomes more or
less interspersed after a few weeks with black hairy feathers
The bare parts of the head are a livid red, varying in many
places to a fine yellow ; the cere is yellowish ; the upper man-
dible is livid horn coloured, and the lower greenish yellow ;
the tarsi and toes are bluish yellow ; the claws black, and the
eyes dark brown.

Wherever travellers have penetrated, specimens of this bird have been met with, and though nowhere congregated in numbers, yet the individuals are so numerous, that there is scarcely a farm-house in the colony, or a kraal, or a temporary resting place for travellers beyond it, which are not once or oftener in the course of the day visited by one or more of them. In their flight they are constantly in search of carrion, which forms their only food; and it is with a view of procuring such that they resort to the localities just mentioned. They build their nests in crevices of rocks of difficult access, and lay one or two eggs.

2. NEOPHRON CARUNCULATUS.—*Smith*.*

N. obscuro-fuscus; caput et pars superior gutteris purpurea et nudata, ultimum carunculis parvis transversis albis octo aut decem; irides fuscae.

Bill greenish black towards base, dark horn colored near tip; eyes dark brown; front, crown, sides of head, and upper part of throat bare, and of a purple color, with eight or ten white transverse caruncles on the latter; nape, upper part of neck, and lower part of throat covered with a light reddish brown down, and between that of the latter and the caruncles already mentioned, a large oval patch of black down; lower part of cervix, interscapulars and back deep brown; the feathers all edged and tipped with a lighter tint; shoulders nearly the same; primary quill feathers blackish, with a grayish tinge towards quills; secondaries blackish brown, with the color of the tips and edges lighter than that of the centres; thighs covered with a white down in addition to some long brown feathers on the outer sides; legs and toes pale greenish blue; claws black. Length two feet two inches; breadth from tip to tip of wing five feet six inches. Inhabits the North-East frontier of the colony, and is not uncommon towards the sources of the Orange River.

Obs.—This species in most of its characters resembles the genuine Neophron, whilst, in the want of feathers on the throat, it approaches the Vultures. The Vultur Occipitalis of Ruppel† is described as having slight transverse caruncles upon the upper part of the throat, but the form of its bill, and its other characters, clearly bespeak its position to be in another genus.

(To be continued.)

* *South African Advertiser*, May 13, 1829.

† Atlas zu der Reise im Nordlichen Afrika von Eduard Ruppel, erste, Abtheilung Zoologie, page 33, taf. 22.

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
No. II., JANUARY to APRIL, 1830.]

A Description of the Birds inhabiting the South of Africa. By ANDREW SMITH, M.D. Member of the Wernerian Natural History Society of Edinburgh; Honorary Member of the Mineralogical Society of Jena, &c.

[Continued from p. 17.]

• Genus. GYPAETUS. *Storr.*

<p><i>Caput, plurimum collumque totum plumosa; rostrum subcrassum barbatum; nares barba setosa, aperta. Remiges 2^{da}. et 3^{tia}. æquales longissimæ. Tarsi breves plumosi; Rectrices 12.</i></p>	<p>Head and neck for the most part covered with feathers; beak moderately strong bearded; nostrils covered by a hairy beard; second and third wing feathers equal, and the longest; tarsi short and feathered; tail composed of twelve feathers.</p>
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Vultur *Lath. Briss. Meyer.*—Falco *Gmel.*

1. GYPAETUS BARBATUS. *Cuv.*—*Arend and Lammervanger* of the Colonists.

Vultur barbatus et barbarus, *Lath. Ind. Orn. vol. 1, p. 3, sp. 5 and 6.*—Vultur Leucocephalus, *Meyer, Taschenb. Deut. vi. p. 9.*—Falco barbatus, *Gmel. p. 252, sp. 38.*—Vultur aureus, *Brisson Orn.*—*Edwards, t. 106.*

G. rostro niger; capite et cervice subalbidus; dorso et scapulis fusco-nigricans; subtus subfulvus; iridibus duobus circumlis, interiore flavo, exterioro rubro.

Bill black; head and cervix dirty sallow white; circle round the eyes, and space between them, and bill covered with a deep black hair as well as each side of lower mandible, at base, also some similar hair under the bill, which is in the form of a large tuft pointing forwards; irides of two colors, viz.: yellow towards pupil, and fine red towards circumference; front and part of sides of head behind eyes, as well as base of lower mandible, covered with a dense white down; rest of head and cervix dusky white, faintly tinged with rufous; back and shoulders dusky, inclining to black, the centres of

the feathers being more or less distinctly, an obscure cinereous black, and the edges clear black, the shafts white. Primary and secondary quill feather, together with the tail, more or less grayish; throat, breast, belly, and thighs clear or dull rufous; toes somewhat granulated, and dusky black. Length about three feet.

Young.—Head and neck brownish black; upper parts grayish brown with blotches of dirty white; the anterior part of the back with large white blotches; the scapulars and wing coverts blackish with lighter colored spots; the quill feathers brownish black; iris brown; feet livid.—(*Temminck*.)

This bird is found, though scantily, in most parts of South Africa, and is seldom seen in company either with those of its own species or of any other genus. It frequently resorts to spots where carrion occurs, and feeds upon it; and it often also, according to the statements of the inhabitants, attacks and kills the smaller quadrupeds.

FAM. FALCONIDÆ.

Caput plumosum; aut partim denudatum, rostrum forte, aduncum, basi cerigerum; nares laterales, in ceromate positæ, plus aut minus rotundatæ, apertæ; digiti externi præcipuè mediis connexi, ungues validi, acutissimi, maximè incurvi, retractiles.

Head clothed with feathers or partially naked; beak strong, bent down, and furnished with a cere; nostrils lateral, placed in the cere, more or less rounded, and open; outer toes chiefly connected with the middle one; claws stout, very acute, much incurved, and retractile.

Stirps.—AQUILINA. (EAGLES.)

Rostrum longum ad apicem solum aduncum; remex quarta præcipuè longissima

Beak long, hooked at the tip only; the fourth quill feather usually longest.

Genus. POLYBOROIDES. *Mihi*.

Rostrum compressum præcipue versus culmen, modice uncinatum. Nares longitudinales et angustæ, ceroma læve; latera capitis ante et partum etiam post oculos denudata. Tarsi longi graciles et reticulati; ungues compressi acuti; 3ta remex longissima.

Bill compressed, particularly towards culmen; moderately hooked; nostrils longitudinal and narrow; ceroma smooth; sides of head to some little distance behind eyes bare. Tarsi long, slender, and reticulated; claws compressed and acute; fourth quill feather the longest.

POLOBOROIDES TYPICUS.

P. caput, collum, et dorsum, cæsia lineis transversis aut maculis nigris variegatis; gutture et pectore cæsiis abdomine et femuribus, albis, negro transverse, striatis; remigibus primariis, nigris, secundariis cæsiis; rectricibus nigris, facia lata, apicibusque albis.

Bill dark horn colored; orbits and cere inclined to orange; front, crown, neck, interscapulars, and back fine gray; shoulders and scapulars the same, slightly variegated, however, by narrow dusky lines, and most of the latter besides have also a large black blotch towards their tips. Primary wing coverts dark gray, each with a large black blotch towards the tip, which last in all of them is white; secondary coverts the same, only the gray is a little lighter. Primary wing feather gray towards quills, elsewhere shining black, with the exception of some of the innermost, which are white; secondaries principally gray, having each a broad black bar towards tip, which itself is white. Tail long, rounded, shining greenish black, with a broad band of white mottled with black towards its extremity, and the apices of all the feathers white, as well as a little of the vanes of each towards quills; chin, throat, and breast an uniform fine gray; belly, vent, insides of shoulders, hinder part of back, and whole of thighs finely marked with transverse black and white lines; tarsi and toes yellowish brown; claws dark horn colored. Length two feet four inches. Found, though very seldom, in the eastern districts of the colony and in Caffreland, as also in Madagascar.

Obs.—Some years ago I saw a specimen of this species, though in a very different plumage, viz. chiefly brown; which was, doubtless, either a young bird, or else the female, if her color differs from the male.

GENUS. HALIÆETUS. *Savigny.* SEA-EAGLE.

Rostrum supra convexum; nares lunulatae, transverse; ceroma subhispidum. Tarsi semiplumati; acrotarsia scutellata. Digiti liberi, externus versatilis; ungues inæquales, acuti.

Beak convex above; nostrils lunulated, transverse; ceroma subhispid. Tarsi half feathered; acrotarsia scaled. Toes free, the outer one versatile; claws unequal acute.

HALIÆETUS VOCIFER. *Groote Vischvanger* of the Colonists.

Falco vocifer, Shaw, 7, p.94; Le Vocifer, Le Vaillant, Ois Afr. pl 4.

T. capite, collo, parte anteriore dorsi, pectore, et cauda albis, humeris abdomine cruribusque, ferrugineis; ceroma et digitis flavis.

Male.—Bill black; cere yellow; space between cere and

eyes yellow, and thinly covered with black hair; "eyes reddish brown." Head, neck, interscapulars, anterior part of back, and breast pure white; the feathers of the head, back of neck, and interscapulars, with their shafts brownish red; belly and thighs deep chesnut. Primary and secondary wing coverts, as well as primary and secondary wing feathers, deep shining black; tail slightly rounded, and pure white; legs and toes deep yellow; claws black. Length from bill to root of tail twenty-five inches; length of latter eight inches.

Female.—The black color is less clear; the white is more dusky; and the chesnut lighter; which, together with the greater size, form the only differences between the sexes.

Young.—"The parts that are white in the old bird, are ashy gray in the young;" those that are chesnut in the former, are brownish in the latter; and the shoulders and back are also of a brown color; the wing feathers are black, but not so deep as in mature specimens. "In the third year it acquires its complete plumage."

In the vicinity of most of the large rivers of South Africa this bird occurs, and it is also now and then met with about the different bays along both coasts; but particularly the South-east one. "They build their nests upon the tops of trees or on rocks, and the female lays three or four white eggs, rather larger than those of the turkey." When this bird is observed to make much noise as perched upon the trees on the banks of rivers, the inhabitants consider rain as near at hand.

HALLÆTUS BLAGRUS. *Fishing Eagle* of the Colonists.

Falco blagrus, *Shaw* 7, p. 96; *Le Blagre*, *Le Vaill.* *Ois Afr.* pl. 5.

H. fuscus, *capite, collo, cauda, corporeque subtus albis humeris fuscis; iridibus fuscis; tarsis flavis; unguibus nigris.*

"Bill brownish; eyes deep brown; head, neck, breast, belly, and thighs satin white, with the feathers of the head and back of the neck edged with brown. Scapulars and secondary wing coverts light grayish brown; tail the same, with the exception of the tip, which is white. Primary wing feathers blackish; outer vanes of secondaries like the scapulars; legs and feet yellowish; claws black." Length about "two feet."

"This bird is found inhabiting the sea coast and the banks of rivers abounding with fish; and is hence seldom met with far in the interior." Near the mouth of the Boscheman river I once saw a bird of prey, which was, evidently, one of the species above described; and on another occasion one perched upon a large tree over-hanging the Keiskamma. I have never, however, been able to procure specimens for examination.

Genus. CIRCÆETUS. Vieillot.

<p><i>Rostrum supra convexum; nares lunulatae; ceroma subhispidum. Tarsi elongati, nudi; acrotarsia reticulata. Digi- tali breves; externus cum medio ad basin connexus; ungues breves subaequales.</i></p>	<p>Beak above convex; nostrils lunulated; ceroma subhispid. Tarsi elongated, naked; acrotarsia reticulated. Toes short; the outer connected at the base to the middle one; claws stout, nearly equal.</p>
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CIRCÆETUS PECTORALIS.

C. nigro-fuscus aut niger, guttere et pectore nigris, abdomine, crisso; et cruribus albis; cauda facis transversis nigris que albidis striata; Iridibis flavis; tarsi subalbidis, unguibus rostroque subnigris.

Male.—Bill dark horn colored; eyes fine yellow; head, together with the back and sides of neck blackish brown, the former often with a slight tinge of gray; interscapulars, back, tail coverts, and shoulders blackish brown, each feather more or less distinctly tipped with a dusky or pure white; throat variegated black and white; breast pure black or brownish black; belly, under tail coverts, and thighs pure white. Primary quill feathers black, with the exception of the greater portion of the inner vane of each towards its base, which is white; secondaries marked by transverse black and grayish, or grayish white bands, and distinctly tipped with white. Tail nearly even and composed of twelve feathers, each of which has, or may be said to have, white or gray and white as the ground color, and to be crossed more or less completely by three broad black bands. When the two colors first mentioned occur in the same specimen, the gray occupies only the outer vanes towards the tips, and sometimes a little of the inner ones near the shafts, whilst the white appears in all other situations. When viewed below the whole ground color appears a pure white, and the three transverse bands a dusky black. Legs and toes livid white, with a tint of greenish; claws black. Length from bill to base of tail fourteen inches; length of tail nine inches and a half.

Female.—In point of color the male and female are nearly alike, but the latter is always considerably larger than the former.

Young.—When it leaves the egg it is covered with a dense white down, which, after a few months, is concealed by an uniform light chesnut or a dull earthy brown plumage*. The

* I have met with young specimens of this species of both colors, which might possibly have been different sexes.

primary quill feathers are the same as in old birds, but the secondaries are less distinctly banded, and the proportion of the white in the bands is smaller, or indeed almost wanting, gray being the prevailing color; the tips are white. The tail is banded, but the colors are in a reversed proportion, dark brownish black, or black being the most abundant or ground hue, and reddish white the most scanty. The latter occurs in the form of narrow transverse bands, about four or five on each feather, and the tips of all have besides a narrow edging of dusky white; the tail is also considerably longer in young specimens than in old ones*. Legs and toes shaded with brown; claws nearly black; bill dark horn colored, shaded with yellow; eyes yellow; length of the tail ten inches and a half.

Examples of these species are sometimes met with in a very different plumage to either of the above described; namely, with the under parts principally white, slightly spotted with black or dark brown, and more or less clouded with pale rufous or dirty light chesnut. The head nearly white, or only with shades or streaks of brown, and the back and shoulders brownish, with the feathers more or less distinctly tipped with white.

This bird builds its nest on trees, and constructs it externally with dried twigs, and internally with wool, hair, &c. It lays usually one, though sometimes two eggs, which are very large, and of a pure white color. Wherever South Africa has been explored, the present species has been met with, and though no where in great numbers, yet it is not so rare as to enable us to imagine how it escaped the notice of Le Vaillant. It feeds upon snakes, lizards, mice, &c. and I have been assured by many of the colonists that it even, at times, catches and devours fish. The male and female are usually found together; the young birds acquire the plumage of maturity about the months of May or June of, *perhaps*, the second or third year.

GENUS. HELOTARSUS. *Mihi*†.

<i>Rostrum superne convexum,</i>	Bill convex above, moderate-
<i>modice curvatum et uncinatum;</i>	ly curved and hooked; nos-
<i>nares lunulatae; ceroma laeve;</i>	trils lunulate; cere smooth;
<i>lora subpilosa. Tarsi breves</i>	lores thinly set with hair.

* This is not peculiar to the *Circæetus*, but also occurs in the young of many other genera.

† In relation to the position I have chosen for this Genus, as well as for that of *Polyboroides*, I may observe that I am not inclined to view either as well placed. The want, however, of the means of comparing them with the various other genera to which they are more or less allied, renders it necessary for me to leave their immediate affinities to be discovered by others enjoying better opportunities.

partim plumis et partim squamis rigidis elevatis tecti; digiti squamosi et prope ungues scutullati; ungues inæquales modice curvati. — Remex 2da. longissima, 1ma. et 3tia. fere æquales.

Tarsi short, partly covered with feathers, and partly with rough elevated scales; toes scaly, and towards claws scutulate; claws unequal, moderately curved. The second wing feather the longest, the first and third nearly equal.

HELOTARSUS TYPICUS. *Boot or Berghaan* of the Colonists.

Falco ecaudatus, *Shaw*, vol. 7, p. 98.—*Le Bateleur*, *Le Vaillant Ois. Afr. pl. 7 and 8.*

H. niger, dorso, caudaque rufis; humeris griseo-fuscis; tetricibus alarum nigris; primariis et secundariis, griseis aut cinereis prope bases, nigris versus apices.

Male.—Tip of bill black; base and the cere orange; eyes deep red; head, neck, and under parts clear black; interscapulars, back, and tail clear deep chesnut; shoulders grayish brown; primary and secondary wing coverts black; primary wing feathers with both vanes gray, and the inner ones edged near quills with white; secondaries cinereous gray, with the inner vanes edged with white; and each feather broadly tipped with fine shining black; scapulars black; tail slightly rounded, and the wings, when folded, about three inches longer than it. Tarsi reddish, more or less inclined to orange; toes similarly colored; claws black. Length from bill to base of tail seventeen inches; length of latter five inches and a half.

Female.—Colors disposed as in the male, only less bright; size a little greater.

Young.—Cere bluish; bill horn colored; feet and tarsi yellowish; plumage brown, lightest on the head and neck, most of the feathers with the edges and tips of a fainter hue; primary and secondary wing feathers blackish, tinged with gray; tail blackish brown; claws black.

It is found in Autniqua land and in the eastern districts of the colony, as well as in the country around Lattakoo. It flies very high, and exhibits a peculiar appearance on account of the shortness of the tail and the length of the wings. *Le Vaillant* says it kills young antelopes, lambs, ostriches, &c., but I have seen it only feed upon carrion, which it did with great avidity.

Genus. AQUILA. *Auct.*

Rostrum supra subangulare; nares rotundatæ; ceroma subhispidum. Tarsi usque ad digitos plumati.

Beak somewhat angular above; nostrils rounded; ceroma rather hispid. Tarsi clothed with feathers to the toes.

1. AQUILA BELLICOSA. *Daudin.*

Falco Armiger, *Shaws Zoology*, vol. 7, p. 57.—Falco bellicosus, *Ind. Orn.* vol. 1, p. 9.—Le Griffard, *Le Vaillant Oiss. d'Afrique*, tome 1, pl. 1.

A rostro nigricante; capite subcristato; plumis capitis, cervicisque albo et nigro-fuscus variegatis; dorsi humerorumque fuscis albo marginatis. Infra alba; remigibus primariis nigris apicibus albis; secundariis et rectricibus nigro griseoque fasciatis, extrema parte albis.

Bill bluish at the base, black elsewhere; eyes fine brown; space between them and bill thinly covered with black bristles; plumage of hindhead a little elongated, so as to form a slight crest. Feathers of head, and of back and sides of neck, as well as of the front thereof towards its middle, variegated blackish brown and white; the latter towards their bases and tips, and the former intermediate between those; interscapulars, back, tail, coverts, and shoulders more or less deep brown; with the tips of all the feathers, but particularly of those of the latter, dusky white. Throat, breast, belly, and legs pure white. Primary wing feathers black, tipt with white; secondaries alternately banded with dusky blackish brown and dull hoary gray, and all broadly tipt with white. Tail slightly rounded, with each feather banded more or less directly across by black and hoary gray, the latter usually passing to white towards the inner margins of the inner vanes, and all distinctly tipt with white. Tarsi and toes a light livid green, inclining sometimes to yellowish green; claws deep black and much curved; length from bill to base of tail twenty inches; length of latter twelve inches; expanse of wings about eight feet and a half.

Le Vaillant says*, the female is about one-fourth larger than the male, and nearly of the same color; that she lays two large and almost round white eggs in a nest constructed on a tree or upon rocks, according to circumstances; that the male and female are usually seen together, and that their favorite food consists of hares and the smaller antelopes, which they pursue with much activity and determination. He also remarks that it is only found on the western coast of South Africa, which is also the locality that my experience warrants me in assigning it, as the only two examples I have seen were near to the mouth of Oliphants River.

2. AQUILA VULTURINA. *Berghaan and Dassievanger* of the Colonists.

Falco Vulturinus, *Shaw's Zoology*, vol. 7, p. 58.—Le Caffre *Le Vaillant Oiss. d'Afrique*, tome 1, p. 28.

* Wherever my own observations are deficient, and the want can be supplied by a reference to the work of the author just quoted, I shall always avail myself thereof without hesitation, only making him responsible by acknowledging the authority.

A. nigra, rostro nigricante; ceroma flavum, dorso albo.

Bill blackish blue, verging here and there to a light horn color; cere deep yellow; eyes reddish brown; space between them and bill pretty thickly set with black bristles; back and tail coverts white; plumage elsewhere deep black; tail more rounded than in the foregoing species; tarsi and toes deep yellow; claws black. Length from bill to base of tail 17 in.; length of latter 12 in.; expanse of wings about 7 feet.

Young.—The upper mandible towards base is yellowish, the rest is livid black; the lower, with the exception of the tip which is of the latter color, is a clear yellow; the head, the back, and the sides of neck, clear reddish tawny, inclined to a pale chesnut; the interscapular and shoulder feathers dirty brown, edged, and strongly tipped with tawny; the back a mixture of chesnut, brownish black, and dirty reddish white. Below reddish brown of various tints, with the centres of feathers blackish or blackish brown; legs light tawny. Primary feathers have their inner vanes, towards their bases, marked by transverse black and white bands, and the outer ones by an uniform brownish red, elsewhere brownish black, with waved bands or narrow lines of hoary gray, and all tipped with reddish white. Tail feathers towards quills black, crossed with narrow reddish white bands; near extremities reddish brown, and tips reddish white; feet and toes livid white; claws black.

Obs.—This is one of the few birds which do not appear to have been quite correctly studied and observed by Le Vaillant. He states it as displaying certain characters of the Vultures, though it doubtless exhibits in its formation and habits, all the peculiarities of the genuine eagles; and he affirms that it feeds upon carrion, but I have never observed it to resort to situations where such existed. As far as my experience goes its food consists almost entirely of the Dassie (*Hyrax Capensis*) and from that circumstance it is usually met with near the tops of mountains, either soaring about or perched in positions from whence it can discover the little quadrupeds just named, upon which it descends with a character clearly indicative of its affinity. Besides such differences in the less tangible points, there is a very material variance in some of the more evident characters, particularly in that of color, which he describes as being entirely black; whilst in twelve adult specimens that I have examined the back and tail coverts were invariably white. That such an omission should have been committed by an observer of such amazing accuracy I can hardly conceive, yet I cannot bring myself to believe that specimens procured by him were without the white back; and, therefore, feel persuaded that his

description was taken from a stuffed specimen, in which the wings were, probably, so disposed as to conceal the color.

This species is said invariably to build its nest in the most inaccessible positions, and to lay one or two eggs. It is much more common than the last described species, even in the country in which both occur; and its habitat is far more extended, being about all the mountainous ranges, and even the majority of the detached hills throughout the colony, and the country a long way to the northward of it.

AQUILA CHOKA. *Chok* of the Colonists.

A. supra fulvus aut subfulvus fusco variegatus; infra fulvus pectore et hypochondriis, maculis nigris, longitudinalibus, notatis pedes flavi, unguis nigri.

Male.—Bill livid blue towards base, dark horn colored at tip; cere yellow; eyes reddish brown; front, crown, neck, interscapulars, and back, pale tawny, with here and there brownish variegations; tail coverts tawny or dirty white; shoulders varied tawny and dark brown; scapulars blackish brown, more or less distinctly tipped with reddish white; primary quill feathers blackish brown, some of them edged on outer vanes with tawny red, and all tipped with reddish white; secondaries dark dirty brown, narrowly edged and tipped with reddish white; primary quill feathers black; secondaries blackish brown on their outer vanes, on the inner grayish variegated by many transverse dark bands; tips of all reddish tawny; tail rounded, brownish gray, and much mottled by partial indistinct dusky black transverse narrow bands; tips of feathers all tawny; under parts tawny with brown variegations, particularly numerous on the flanks and anterior part of the belly; thighs dark ferruginous; toes yellow; claws dark horn colored. Length about two feet four inches.

Female.—Color nearly that of the male, and distributed in the same way; size rather larger.

Young.—Prevailing color chesnut, without any of the brown variegations of the older bird; feathers of the head and back of neck tipped with light tawny; tail dirty brownish gray, tipped with reddish white; cere and toes dull yellow; claws black; eyes yellow.

As far as travellers have penetrated, they have found specimens of this bird; it is pretty abundant all over the colony, and usually resorts to places where carrion exists, to procure its food. When an animal dies it is usually one of the first visitors, and it eats with avidity till the Vultures arrive, when it gives place to them, and remains afterwards a simple spectator. The female builds her nest on trees, but I have had no means of ascertaining the number of eggs she lays.

Obs.—The colors described as marking the old birds, are those most commonly met with, but it may be observed that specimens obtained soon after the moulting season have a chestnut instead of a tawny tinge, and all the brown variegation deeper and clearer. Though I have no direct reason for believing that the plumage described as that of an old male, is only that of one of a middle age, yet from having witnessed so much variety in the markings of birds in that stage, I think it is not improbable that farther observations will prove the mature color to be a little different.

Genus. MORPHINUS. *Cuvier.*

<p><i>Rostrum supra convexum; nares elliptici. Tarsi elevati, subgraciles; acrotarsia scutellata. Digiti subbreves; ungues acuti.</i></p>	<p>Beak convex above; nostrils elliptic. Tarsi elevated, rather slender; acrotarsia scutellated. Toes rather short; claws acute.</p>
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Spizaëtus, Vieillot.

MORPHINUS ALBESCENS.

Falco albescens, Shaw, vol. 7, p. 93.—Le Blanchard, Le Vaillant Ois Afriq. pl. 3.

M. albescens; cristatus; supra fusco-flavescente varius; cauda nigra albo fasciata.

Male.—Bill lead colored; eyes fine yellow; head with a small crest; the whole plumage white, clouded with blackish brown upon the mantle, and soft to the touch; tail rayed transversely black and white; primary wing feathers with the outer vanes brownish, and the inner ones rayed; claws a leaden color." Length about two feet six or eight inches.

Female.—"A third larger than the male."

Young.—As well as Le Vaillant could judge from two young specimens which he found in a nest, the color of the plumage is nearly that of the the old bird, excepting that the brown is more abundant, and all the wing coverts are bordered with reddish. When this species leaves the egg it is covered with a tawny white down."

Le Vaillant found this species in Autinequa land, and the only two specimens which I have ever seen, occurred one in the forest between the Sunday and Bushman Rivers, and the other near Hermanus kraal, on the banks of the Great Fish River; but neither of them was I able to procure.

MORPHINUS OCCIPITALIS. *Kuifkop Valk of the Colonists.*

Falco Occipitalis, Daudin, Ois. 2, p. 40.—Shaw, 7, p. 59.—Nisser Tokoor, Bruce, Le Huppard, Le Vaillant, Ois. Afr. pl. 2.

M. nigro-fuscus aut niger; occipite cristato; remigibus et rectricibus albo variegatis; pedibus flavis.

Male.—Above blackish brown, inclining to a simple black, at least in very old specimens; below the same color, only of a darker tint; head and crest blacker than the other parts; the latter composed of several feathers, and most of them of different lengths, the longest between five and six inches; primary and secondary wing coverts blackish brown, with more or less of the inner vane of each feather white; primary wing feathers white towards quills, blackish brown elsewhere; in the very outermost ones the white occurs only upon the inner vanes, in those next to them it occupies both vanes, and in what are still more internal the white is crossed by black bands; secondaries have the outer vanes an uniform dusky brown, and the inner ones brown and a dusky or pure white in alternate transverse bands; tail slightly rounded, and each feather marked with white; grayish white, or reddish white and black alternate bands; the number of the first description is usually three, besides some irregular ones or only spots towards quills; the bands seldom extend completely across, but have the extremities on each side commonly margined with the same black as the other bands, and between the last light colored one, and the tip nearly two inches of uniform black; bill and claws black; cere and toes yellowish. Length from bill to base of tail nineteen inches; length of latter nine inches.

Female.—In addition to being one-third larger than the male, the colors are less bright, and there is a stronger tinge of brown at all times in the plumage; the legs are also more white; and the light bands of the tail have commonly a stronger shade of gray or reddish white; the white of the primary wing feathers is also generally clouded with light brown; the sides of the head are spotted with white, and the crest is shorter.

Young.—“When they escape from the egg they are covered by a grayish white down, which is replaced by degrees by brownish feathers, edged with red. At the time they leave the nest the crest is quite apparent.”

This bird constructs its nest upon trees, and lines it inside with feathers and wool; the females lay two nearly round eggs, which are spotted with brownish red. The male and female usually occur together, and Le Vaillant found them only in Auteniqua land. A fine specimen of this species was shot near Stellenbosch by Dr. Versfeld, and I have seen others frequently about the sources of the Cowie River, and on the banks of the Great Fish River towards De Bruin's Drift. It may, therefore, be said to inhabit the whole of the South-

east coast, and also the interior towards the eastern frontier of the colony, as well as beyond it.

MORPHINUS DUBIUS.

M. supra fuscus aut nigro fuscus; infra albus striis, longitudinalibus fuscis variegatus; latera colli pectoris que subfusca. Remiges nigro-fuscae, albo aut nigro plus minus variegatae; rectrices, fuscae striis nigris undulatis notatae, et apices albæ, digiti flavi, rostrum et unguis subnigri.

Female.—Bill bluish black; cere yellow; plumage above brown or blackish brown, according to the age and season of the year, the shafts of the feathers and a portion of the vanes adjoining being always darkest; feathers towards quills more or less white; shoulders the same color as back, with the exception of the margins of the feathers, which are of a lighter tint; sides of neck and breast variegated brown and white; chin, throat, and centre of breast chiefly white, with some brown shades in the form of longitudinal streaks that include the shafts of the feathers; belly white, here and there variegated with clouds of light reddish brown or with dark brown narrow streaks, produced by the shafts being of that color. Several of the long feathers on the flanks more or less distinctly crossed with reddish brown, and those on the outside of the thighs also slightly marked in the same way, only with a lighter shade, the rest of the feathers of the legs pure white. Primary wing feathers blackish brown, except the inner vanes towards quill, which are a pure white or white and black in transverse bands, the latter distribution occurs most particularly in some of the innermost ones, which are almost for their whole extent so marked; secondaries blackish brown, the inner vanes banded with a darker tint, and all pretty broadly tipped with white; insides of shoulders white, with a few blackish brown spots or blotches. Tail nearly even, the feathers blackish brown, variegated with narrow waved irregular bands of a darker tint, and all besides being tipped with white are more or less mottled with that color, particularly the inner vanes near quills; upper tail coverts reddish white; toes yellow; claws black. Length from bill to root of tail ten inches; length of latter eight inches.

Young.—Bill bluish black; cere greenish yellow; plumage above a light brown, with the tips and edges of the feathers light tawny or reddish; chin, throat, and centre of breast light tawny with brown streaks; belly the same color, with a few narrow brown lines; flank feathers, and those on outside of thighs marked as in older specimens; wing feathers and tail with the brown less deep; toes greenish yellow; claws black.

Obs.—In the above descriptions I am very doubtful if either

the mature or young plumage be detailed, as a variety of circumstances concur to induce me to believe that both are examples of a plumage in a middle stage, only; that of the one being at least a year older than that of the other. Of the four individuals which I have had an opportunity of examining, two were killed at the *Heer Logement*, near the Oliphants River, one near Cape Town, and the other some where in the interior. At the former of those situations this bird is by no means rare, but on account of its great shyness is with difficulty obtained. It retreats upon the approach of evening towards the higher parts of the mountains, and perches during the night upon the branches of old and decayed trees. In the day it resorts to the plains in search of food, and in its progress through the air it commonly soars, is circles, and at a great height, whereby it is almost impossible to destroy it while on the wing. In consideration of its form and general character, I have placed it for the present in the Genus *Morphinus*, though I am not quite convinced but that a more extensive opportunity of studying and comparing its characters, habits, and anatomical structure, will point out its affinity and position to be elsewhere. It is a species, therefore, which I should particularly recommend to the observation of the colonists, and specimens of it in different ages would be most acceptable, more particularly the young as found in the nest.

Genus. CYMINDIS*. *Cuvier*.

<i>Rostrum supra convexum ; nares subclausi, rimiformes. Tarsi breves ; digiti semi-palmati.</i>		Beak convex above; nostrils nearly closed, and resembling a cleft. Tarsi short; toes half-webbed.
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CYMINDIS BACHA.

Buteo Bacha, *Cuv. Reg. Animal*, 1, p. 324.—*Falco* Bacha, *Shaw*, 7, p. 157.—La Bacha, *Le Vaillant, Ois. Afr. pl.* 15.

C. obsкуро-fuscus aut nigricans ; humeris, abdomine et cruribus albo notatis ; tectricibus inferioribus caudæ albo lineatis ; crista occipitali nigra albo fasciata ; cauda fascia alba.

Male.—"Bill lead colored; cere and bare space between beak and eyes yellow; eyes a deep brownish red; head black, variegated with white; hindhead crested; the feathers black at their tips, and white elsewhere; plumage above earthy brown or blackish brown, lightest on the wings and shoulders; beneath the same hue, only less deep, and from the breast to the legs the feathers are spotted with white, as are also those on thighs and shoulders; the hinder part of abdomen and vent

* *Shaw's Zoology*, vol. 13, p. 21.

rayed transversely brown and white; tail slightly rounded with a broad band of tawny white, and each feather tipped with white; tarsi and toes yellowish; claws black. Length one foot eight or one foot ten inches."

Female.—"The spots are less distinct, and more of a tawny tinge; the brown is less clear; and the size exceeds that of the male."

Le Vaillant found this bird on the mountains of Great Namaqualand; and I have myself seen several examples of it, at least as far as I could judge, about the tops of the mountains which occur towards the lower part of the Orange River. It is very shy, and on that account, though I endeavoured by every means to procure a specimen, I was unsuccessful. "It makes its nest in holes of the rocks, which it constructs externally of sticks, and internally of leaves or moss, and lays two or three eggs. Rock rabbits (*Hyrax capensis*) form its principal food."—As I have never myself had an opportunity of examining this bird, I have placed it in the Genus *Cymindis*, in consequence of the remarks of Mr. Vigors, one of the most enlightened Ornithologists of the present day†.

Stirps. ACCIPITRINA. (HAWKS.)

Rostrum breve à basi aduncum; alæ breves; remex quarta plerumque longissima.

Beak short, hooked from the base; wings short; the fourth quill generally longest.

Genus. ACCIPITER. *Auct.*

<i>Rostrum breve; nares sub- ovales. Tarsi elongati glabri acrotarsia scutellata, suturâ; vix discernenda.</i>		Beak short; nostrils somewhat oval. Tarsi elongated, gla- brous; acrotarsia scutellated; sutures scarcely visible.
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Sparvius pars, Vieillot.—*Ierax, Leach.*—*Nisus, Cuvier.*

ACCIPITER MUSICUS. *Blaauwe Valk* of the Colonists.

Falco musicus, Daud. Orn. p. 116.—*Shaw, vol. 7, p. 143.*—*Le Faucon Chanteur, Le Vaillant, Ois d'Afriq., p. 117, pl. 27.*

A. canus, abdomine cruribusque, albis, nigro lineatis; remigibus, primariis nigro fuscis, et secundariis albis nigro notatis; cauda rotundata; plumis duabus mediis nigro-griseis reliquis, nigro et albo variegatis; ceroma et tarsiis rubris.

Male.—Upper and lower mandibles at base orange colored, elsewhere black; cere vermilion red; head, neck, and breast

† Zoological Journal, vol. 1, p. 324.

light bluish gray; back and scapulars dark slate color; upper tail coverts white; shoulders silvery gray, finely mottled with black; false wing feathers and primary wing coverts deep hoary, inclined to grayish black; secondary coverts white, mottled with narrow tortuous blackish lines; primary wing feathers brownish black, variegated on inner vanes towards quills with lines or streaks of white; secondaries pure white, here and there dotted or finely streaked with black; belly, thighs, and under tail coverts finely banded black and white. Tail slight rounded, the two centre feathers blackish gray, and the rest blackish, or blackish gray and white in different proportions, the latter particularly abundant in the two outermost ones of each side, and all, with the exception of the two middle ones, are broadly tipped with white. Tarsi and toes vermilion red; claws black. Length from bill to base of tail ten inches; length of latter the same.

Female.—Colors the same as those of the male, and in point of size is but little superior to it.

Young.—Bill blackish, with a little of the base of each mandible yellow; cere greenish yellow; eyes grayish yellow, inclined to pure yellow; head, neck, and back brown, the feathers of the two former white towards quills, whereby the neck in particular, at times, appears much marked with the latter color; tail coverts white, with a triangular brown spot near the tip of each; shoulders brown, with the feathers edged and tipped with reddish white; belly, thighs, and under tail coverts marked with alternate broad irregular brown and white bands; primary wing coverts brown, tipped with white; primary wing feathers reddish brown, banded with black, and the outer vanes tinted with gray; secondaries bluish gray, banded with black, and tipped with white; tail with reddish gray and blackish brown transverse bands; the former four in number; legs and toes somewhat flesh colored; claws black.

This Hawk is very generally distributed throughout the whole of South Africa, and is particularly abundant along the flats adjoining the western coast. It lives upon mice, lizards, and the smaller birds; makes its nest on trees; construct it externally with dried twigs, and internally with wool, and lays two or three white eggs of nearly the size and shape of those of the common domestic hen.

Obs.—In the appendix to Denham and Clapperton's Travels and Discoveries in Northern and Central Africa, p. 195, it is stated that "this beautiful Hawk was met with occasionally in most parts of Central Africa, but not in any abundance." It is placed in the Genus *Astur* by the writer of the observation just quoted, but the length of the tarsi and its general form, appear to me to ally it more to the *Accipiter*.

(*To be continued.*)

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
No. III., APRIL to JUNE 1830.]

V C

A Description of the Birds inhabiting the South of Africa. By ANDREW SMITH, M.D. Member of the Wernerian Natural History Society of Edinburgh; Honorary Member of the Mineralogical Society of Jena, &c.

[Continued from p. 120.]

ACCIPITER GABAR. *Klein Spervel* of the Colonists.

Falco Gabar, *Shaw's Zoology*, vol. 7, p. 202.—Red-legged Falcon, *Latham's General History of Birds*, vol. 1, p. 212.—Epervier Gabar, *Daud.* 2, p. 87.

A. capite, dorso, gula pectoreque cæsiis, abdomine et femoribus nigro et albo transverse fasciatis; remiges nigro-brunneæ, pogniis internis nigro-brunneo et sordido albo fasciatis; cauda nigro brunnea fasciis tribus subalbidis transversis notata, apices plumarum albæ.

Bill dark horn colored; cere deep red; eyes light crimson; head, neck, interscapular, back, and shoulders dirty brownish or reddish gray; chin, throat, sides of neck, and breast, light bluish gray or pale slate color; belly and thighs banded lightish black and clear white. Primary quill feathers nearly an uniform dark brown on the outer vanes, whilst the inner ones are marked by alternate bands of blackish brown and dirty light white; secondaries nearly similarly colored, and all tipped with white. Tail slightly rounded, feathers brownish black, crossed by three transverse bands which appear, when viewed above, of a pale dusky white or grayish white, and, when seen below, of a pure white; the tips of all pure white; legs and toes red; claws horn coloured. Length from bill to base of tail six inches; length of latter six inches and a quarter.

Female.—Length from bill to base of tail seven inches; length of latter seven and a half. The color of back, throat, and breast less clear than in the male; the black lines of the belly rather broader, and the tarsi and toes of a duller yellow.

Young.—Bill nearly as in mature specimens; cere and

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eyes yellow; head and neck variegated blackish brown and rufous, the latter most abundant on the sides of the last named part; interscapulars and back an uniform dark brown, with the exception of some very slight variegations, occasioned by many of the feathers being indistinctly tipped with rufous; shoulder feathers dark brown, tipped and edged more broadly with light rufous; tail coverts white. Chin, throat, and breast light rufous, more or less variegated by longitudinal stripes of dark brown or blackish brown; belly and thighs marked by alternate narrow bands of dirty black and pale rufous; primary and secondary quill feathers nearly as in old specimens; tail blackish brown, crossed by four white bands, besides each feather having a white tip and some spots of a like color near quill; legs and toes yellow; claws horn coloured.

This bird occurs, though not very abundantly, throughout the whole of the known parts of South Africa. Le Vaillant found a nest in the month of September, which contained three young ones. It was constructed, externally, of small flexible twigs; internally, it was lined with feathers, and occupied the cleft of a Mimosa tree. It is, perhaps, more common about the banks of the Oliphant River, in the district of Clan William, than in any other part of the colony.

ACCIPITER MINULLUS.

Falco Minullus, Latham.—Le Minule, *Le Vaillant Ois d'Afr.* pl. 34.

A. supra, cæruleo-niger; subtus, albus nigro-fusco fasciatus; crissum album maculis cordiformibus subnigris notatum; remiges nigro brunneæ, pogoniis internis fasciatis; rectrices ad apicem albæ et pogoniis internis tribus maculis albis notatis.

Male.—Bill black; cere yellow; head, neck, and interscapulars shining bluish black or deep slate color, with, in some lights, a tinge of green; back less shining, though of the same color; shoulders varied with light tints of olive; upper tail coverts white, with transverse blackish bands or spots, the one nearest the tip of each feather somewhat triangular. Chin and throat white, slightly mottled or indistinctly rayed with brownish black; breast and anterior part of belly pure white, transversely rayed with close set brownish black bands, sides of former, indeed sometimes of both, a little tinged with rufous or tawny; hinder part of belly and under tail coverts also banded, but with the lines much more apart. Primary and secondary wing coverts dark brown; primary wing feathers brownish, the inner vanes banded transversely with dusky black; secondaries brownish, with the exception of a little white on the inner edges of inner vanes, which last are distinctly crossed by dusky black bands; insides

of shoulders light tawny, inclining to white, and variegated with irregular narrow brownish lines. Tail slightly rounded, with the outer vanes of all the feathers brownish black, spotted or irregularly banded with reddish brown, and the inner ones nearly pure black, and partially crossed by pure white in three different places; tips of all the feathers white; legs and toes yellow; claws black. Length from bill to base of tail five inches; length of tail four and a half inches.

Female.—The colors of the head, neck, and interscapulars are duller, and exhibit less lustre than those of the male. Length from bill to base of tail about six inches and a half; length of latter five and a half.

Young.—Color above blackish brown, much variegated about the back and sides of neck with white, arising from the feathers in those situations being, with the exception of brown tips, of a white tinge; interscapulars and shoulders mottled by the feathers having rufous tips; upper tail coverts nearly marked as in mature specimens; chin and throat light tawny white, with some longitudinal brown streaks; breast and centre of belly white, with oblong or roundish brown or black spots, and many of the feathers narrowly tipped with white; sides of belly white, with broad brown bands, and a more or less general tinge of rufous; under tail coverts white, with some heart-shaped blackish spots; thighs rufous white, with irregular transverse brownish bands. Primary wing feathers brownish, with the inner vanes towards quill marked in a dentated form by tawny; secondaries brown, with a large proportion of tawny disposed as in the primaries, and with the edges of outer vanes and the tips of the feathers marked by the same color. Tail a little rounded, the outer vanes of all the feathers dull brown, the inner ones dusky black and tawny white in alternate transverse bands; the tips of all the feathers white; legs, toes, and base of bill yellow; claws black; "eyes orange yellow."

This bird is met with in the forests of Sitsikamma, and also about the Baviaan's River, and other situations where forests occur in the eastern districts of the colony. Its food consists usually of the smaller birds, but when those are not procurable it devours grasshoppers and some other insects. According to Le Vaillant, it constructs its nest externally of flexible twigs, together with moss and dried leaves, internally with wool and feathers, and lays about five eggs.

Obs.—It will readily be seen by those whose have an opportunity of consulting the beautiful work of Le Vaillant, that the bird figured in it under the name "Le Minulè," is what has just been described as a young bird. The evidence I possess, leaves no doubt as to its being the plumage of the first

year which he describes and represents ; and, therefore, forces me to dissent from an authority I so much admire.

ACCIPITER TACHIRO.

Speckled Sparrowhawk, *Latham*.—Le Tachiro, *Le Vaillant Ois d'Afrique*, pl. 29.

A. supra brunneus; infra albus faciei nigro-brunneis transversis variegatus. Remiges brunneæ, pogoniis internis nigro fasciatis et versus bases variegatis; rectrices brunneæ faciei latis nigris notatæ; tarsi et digiti flavæ.

Male.—Bill bluish black, with a small yellowish spot on the edge of the tooth of upper mandible, and another opposite it on base of lower; cere yellow; front, crown, back of neck, interscapulars, back, upper tail coverts, and shoulders dull brown; the feathers of nape all white towards quills, thereby giving rise, in certain position, to a mottled appearance. Chin and throat pure white; sides of neck white, with narrow transverse brown bands; breast and belly white, banded transversely with brown, the bands few towards the middle, but numerous on the sides; under tail coverts white, irregularly crossed by a few narrow brownish lines; thighs tawny white, with broadish transverse brown bands. Primary wing feathers brown, banded on the inner vanes by black towards their tips, and by black and nearly clear white towards quills; secondaries the same as primaries, with the exception of the white being more abundant on the inner vanes. Tail slightly rounded, of a light brown color, and crossed by four broad blackish bands*, and the tips of all the feathers more or less white; legs and toes yellow; claws black. Length from bill to base of tail seven inches; length of tail seven and a half inches.

Female.—Length from bill to base of tail nine inches; length of latter eight inches; body considerably larger than in the male, and the colors similarly disposed as in it, only they are of a duller tint.

Young.—Above brown, but of a lighter tint than in mature specimens, and the feathers of the back and shoulders edged and tipped with clear rufous; chin and throat tawny white, the former with a longitudinal black streak towards its centre; breast and belly tawny white or pure tawny, and each feather marked in the middle by a large oval or oblong blackish spot; under tail coverts tawny white, variegated by cordiform or

* It will often be observed that in the same bird the number of bands are not alike in all the tail feathers, particularly about the moulting season, which will generally be found to arise from old and new ones existing in the same specimen.

roundish dusky blotches; thighs rufous, with transverse brown bands or irregular cordiform or roundish spots. Primary wing feathers dirty brown, inner vanes banded towards tips by black, and towards quills by white and black; secondaries brown, with the inner vanes banded by black, and their edges irregularly and broadly marked by white, the outer edges and tips rufous. Tail slightly rounded, with four broad blackish transverse bands, and the spaces between these tawny or rufous, tips of all the feathers whitish; legs and toes greenish yellow; claws black. The colors of the male and female are nearly alike, and there exists the same difference in size between them when young as when old.

Le Vaillant found this bird in the forests of Auteniqualand, and I have seen several which were killed in the eastern districts of the colony, as well as in Cafferland. Its nest, according to the author just named, is placed upon trees, and constructed externally of small twigs and moss, and internally of feathers. From some small portions of shell which he found about a nest, he considered the eggs as white, with red spots. In the nest itself, as well as on the branches of the tree on which it was placed, were found the remains of grasshoppers, &c.

Obs.—Though “Le Tachiro,” as figured in the work upon African birds is considered by its author as an adult specimen, yet I have every reason to be satisfied that it is only the young of the species just described.

ACCIPITER MELANOLEUEUS.

A. niger; remiges nigræ, pogoniis internis albo maculatis aut fasciatis; cauda sordido-fusca fasciis transversis nigris quatuor.

Bill black, with the exception of the tooth of the upper mandible, and a small portion of the lower directly opposite it, which are yellowish; cere yellowish; color above black, with a faint tint of brown, beneath pure deep black; primary and secondary wing coverts black; primary wing feathers black, with their inner vanes towards quills spotted, or irregularly banded with white; secondaries dusky brown clouded with black, and the inner vanes spotted with white; scapulars brown, with some white blotches on both vanes. Tail slightly rounded, with four broad black transverse bands, the intermediate spaces dirty tawny brown, and the outer vane of the outermost feather of each side with some oblique short white stripes towards quill, and internally with white blotches; the two next with blotches on the inner vanes, and the centre ones without such marks; legs and toes greenish

yellow; claws black. Length from bill to base of tail eleven inches; length of latter nearly the same*.

Young.—Bill nearly as in mature specimens; head rufous, with the centres of all the feathers black; back and sides of neck similarly marked, but the spots largest on the former, whereby the latter exhibits a greater proportion of rufous; interscapulars, back, shoulders, and tail coverts brown, the latter broadly tipped with rufous; the feathers of the back and shoulders with narrow edgings and tips of the same color. Chin and throat tawny, variegated by a few black longitudinal streaks; breast and belly similarly colored, but the streaks considerably larger and more numerous; under tail coverts and thighs tawny, without, or with but very few variegations. Primary and secondary wing coverts brown, tip with tawny; primary wing feathers dark brown, the inner vanes towards tips banded with black, and towards quills with black and white or pale tawny; secondaries brown, banded with black on their inner vanes, and mottled towards the edges of latter with tawny white, all the tips tawny. Tail slightly rounded, each feather with four or five transverse bands of black, and between these brown, finely mottled with white, some of the black bands are, in some specimens, somewhat arrow-shaped, and have a line of tawny white on the edge most distant from the body. Instead of an uniform brown between the black bands, there is, in several of the lateral feathers a mixture of white, either in the form of blotches or partial bands, the tips of all the feathers are tawny white; legs and toes greenish yellow; claws black.

The only specimen of this species which I have seen exhibiting the mature plumage was shot on the Baviaans River, and the two young ones which I have had the means of comparing with it, were killed near Wynberg.

Obs.—Though there are many and strong points of similarity between the three specimens just viewed as belonging to the same species, yet there are some others also, which warrant the existence of doubt; and, therefore, till more satisfactory evidence can be obtained, the fact of identity or non-identity must remain undecided. The great approximation, however, does not appear to me to sanction their being described as two species, more particularly as two out of the three are decidedly young, and not referable to any other species I have yet met with here.

* As the history of the bird described is not well known, I have purposely avoided referring it to either sex, though a minute comparison with two young specimens would incline me to view it as a female.

ACCIPITER RUFIVENTRIS.

A. supra brunneus; infra subfulvus; remiges brunneæ, pogoniis internis nigro fasciatis, cauda fuscis quinque nigris et quatuor cæruleo-griseis notata.

Falco rufiventris, Latham's *History of Birds*, vol. 1, p. 284.
—Daud. *Orn.* tom. 2, p. 86.—Epervier bleuatre, *Voy. d'Azara*, 3, No. 26.

Male.—Bill, with the exception of a small yellow spot near base of upper mandible, and another opposite it on the lower, black; head, hinder part of neck, back, upper tail coverts, and shoulders brown, with a tinge of deep slate color, which is particularly strong soon after moulting; sides of neck, chin, throat, breast, anterior part of belly, and thighs light rufous, the three first the palest; hinder part of belly dirty white, banded transversely with rufous; under tail coverts white. Primary wing feathers dirty brown, the inner vanes banded with black, and towards quill marked on their inner edges between the bands by pure white; secondaries brown, with the inner vanes banded with dusky black, and varied with white in the same situations as the primaries. Tail slightly rounded, and marked by five broad transverse bands of dusky black, and four of a dusky or pure bluish gray, tips of all the feathers white; legs and toes yellow; claws black. Length from bill to base of tail five inches and a half; length of tail four and a half.

Female.—Length from bill to base of tail seven inches; length of tail seven inches; colors more dull above, and rather deeper beneath.

Young.—Color above brown, without the dark slate tint of the mature bird, and varied particularly about the shoulders, head, neck, &c. by each feather being narrowly edged with rufous; legs pale yellow; claws dark horn colored.

This species occurs along the South-east coast and to some very considerable distance inland, at least I have seen several specimens from the neighbourhood of Baviaans River, and from the country towards the southern branches of the Orange River; I have also seen examples of the same bird which were killed near Constantia, and between that and Cape Town.

Obs.—This appears to agree with the description of the *Falco rufiventris* of Shaw; and, though he describes his bird as being a native of Cayenne, it might possibly have been obtained from the Cape, or the species may be an inhabitant of both countries.

Stirps. FALCONINA. (FALCONS.)

Rostrum breve à basi aduncum ; alæ longæ ; remex secunda longissima.

Beak short, hooked from the base ; wings long ; the second quill feather longest.

Genus. FALCO Auctorum. FALCON.

Rostrum breve ; mandibula superior fortiter dentata, inferiore emarginata. Acrotarsia reticulata. Remex secunda longissima, prima et secunda propè apicem internè fortiter emarginata.

Beak short, the upper mandible strongly dentate, the underemarginate. Acrotarsia reticulated. Wings with the second quill longest, the first and second strongly emarginate internally near the tip.

FALCO FRONTALIS. Daud.

Falco galericulatus, Shaw, vol. 7, p. 149.—Le Faucon Huppe, Le Vaillant, Ois d'Afric. pl. 28.

F. cristatus, crista brunnea, dorsum plumbeum et plumæ lineis longitudinalibus nigris ; subtus albo, flavescens et fasciis brunneo nigris transversis notatus ; cauda grisea, nigro fasciata.

Male.—Bill bluish at base, and black at tip ; cere yellow ; eyes orange yellow ; head crested, the latter of a brownish color ; behind the angle of the mouth on each side a longitudinal blackish brown streak or blotch ; black bluish gray, the feathers each with a dark streak in the course of the vane, and with transverse dusky bands, besides light bluish white edgings and tips ; sides of neck dirty white, with a slight tinge of tawny ; chin and throat tawny white ; breast and belly the same, and crossed by narrow black bands, as are also the feathers of the thighs. Primary quill feathers blackish ; secondaries deep bluish gray, with blackish transverse bands, and all broadly tipped with the same color as the back. Tail grayish, with seven or eight transverse narrow black bands, and all the feathers tipped with light grayish white ; legs and toes yellowish ; claws black. Size that of the common pigeon.

Female.—Crest shorter than that of the male, and her size nearly a fourth larger.

Young.—All the colors exhibit somewhat of a yellowish tinge, and the dirty white of the chin, throat, and breast is variegated with red and grayish brown ; the crest does not appear till some months after it leaves the nest.

This bird inhabits the borders of lakes, the sea shore, and the banks of rivers abounding with fish ; which last, together

with crabs, forms its favorite food. It builds its nest amongst rocks, or on trees upon the banks of rivers, and lays four eggs of a whitish red color.

FALCO TIBIALIS. *Shaw.*

Le Faucon a culotte noire, *Le Vaillant, Ois d'Afric. pl. 29.*

F. griseo-fuscus; gula alba; corpore subtus rufescente striis longitudinalibus nigro-brunneis, femoribus fasciis longitudinalibus nigris.

Male.—Bill yellow at base, horn colored elsewhere; cere yellow; eyes bright hazel; head blackish brown; interscapulars and shoulders grayish brown, with a deeper colored streak along the middle of each feather; throat white; breast, belly, and under tail coverts reddish white, with brown blotches, which are smaller behind than before; thighs blackish brown, with the feathers edged and tipped with whitish. Primary wing feathers and tail also blackish brown, with whitish edgings and tips; tarsi feathered to within a little distance of the toes; bare part yellow, as are also the toes; claws black; wings, when folded, considerably shorter than tail. Size between that of the *Accipiter Musicus* and the last described species.

Le Vaillant killed a male, of which the foregoing is the description, while feeding upon a young hare, which it had just killed on the mountains of Great Namaqualand; and he says he was informed that the same species was very common on the *Sneeuwbergen*, in the District of Graaff-Reinet.

Obs.—Though the shortness of the wings, and the partially feathered tarsi, might appear to establish this as a separate species from the last, yet there are many circumstances which suggest the identity of the two, and that the present is the description of a young bird. As I have neither met with the one nor the other, the descriptions given are copied nearly verbatim from Le Vaillant.

FALCO CHIQUEROIDES.

F. capite rufo, nigro variegato; dorso et humeris griseis, lineis obscuris transversis fasciatis; duabus fasciis longitudinalibus sub oculos; infra subfulvus aut rubro-albus; remigibus brunneis pogniis internis maculis subfulvis notatis; cauda subgrisea fasciis decem aut undecim transversis nigris, et apicibus plumarum albis.

Male.—Bill bluish, with shades of black, and the base of the lower mandible yellow; cere yellow; eyes dark brown;

front and anterior part of crown black, rest of crown and nape rufous, the last with some dark variegations, or a transverse black band extending from the black of the cheeks; back of neck, interscapulars, back, upper tail coverts, and shoulders hoary bluish gray, with dark slate colored or blackish blue transverse bands; from the eye, on each side, extends a black stripe as far as the nape, and another from each angle of the mouth for a short way down the side of the neck; sides of latter pale tawny white, which is also the color of the chin, throat, breast, belly, under tail coverts, and thighs. Primary and secondary wing coverts hoary blue, with dusky grayish white transverse bands; primary wing feathers brownish, with the inner vanes, for the greater part of their length, partially crossed by somewhat conical white spots; secondaries the same; tail hoary white, with ten or eleven moderately-broad black bands, and the intermediate spaces thinly sprinkled with minute brownish black dots or lines; tips of the feathers all white; legs and toes yellow; claws black. Length from bill to base of tail eight inches; length of latter seven inches.

Female.—Length from bill to base of tail nine inches and a half; length of tail seven inches and a half; front, and nearly all the crown black; the two black bands on sides of head less deep, and smaller than in the male; the rufous of head less clear, and the back with its colors duller, and its transverse bands more inclined to brownish black.

Young.—Head rufous, with the front and nape a little variegated with black; back of neck and interscapulars blackish, with the feathers finely tipped with rufous; back, upper tail coverts, and shoulders blackish brown, with the feathers all broadly tipped with rufous; the black stripes on sides of head less strongly marked than in full grown specimens; sides of the neck rufous; chin and throat tawny white; breast and anterior part of belly pale rufous, with a roundish or oviform black blotch towards the middle of each feather; hinder part of belly, under tail coverts, and thighs pale rufous, without variegations. Primary and secondary wing coverts blackish brown, clearly tipped with rufous; primary wing feathers blackish, with the inner vanes marked by transverse oviform pale tawny spots, the extremities of which neither reach their shafts nor inner edges; all the feathers finely tipped with light rufous; secondaries similarly colored, marked as the primaries, and all broadly tipped with rufous. Tail blackish, with seven or eight irregular transverse rufous bands, and all the feathers broadly tipped with the last color; bill bluish green, with shades of black, and the lower mandible with a very faint tinge of greenish yellow at base;

cere dusky greenish yellow ; eyes dark brown ; legs and toes yellowish white ; claws a dark horn color.

Specimens of this hawk are not unfrequently found along the western coast, and I have also met with some about the Langekloof, at least three hundred miles to the eastward of Cape Town. In those situations it is often seen resorting, in the evenings, to the poplar and other trees in the vicinity of farm-houses, and upon such also it often builds its nest. The latter is constructed externally of dry twigs, and within of hair and feathers, and in it are deposited from three to four eggs, during the months of August or September. It preys on small birds, young hares, &c., and, when in search of such, or in defence of its young, it evinces a most amazing degree of ferocity and courage.

FALCO PEREGRINOIDES.

F. capite saturate cæseo, dorso subgriseo fasciis transversis nigris notato ; macula nigra sub oculum ; gula alba ; pectore albo striis longitudinalibus nigris variegato ; abdomine griseo maculis striis et fasciis transversis nigris variegato ; tarsis et digitis flavis.

Male.—Bill blackish at tip, orange yellow at base of lower mandible, and bluish green elsewhere ; cere yellow ; eyes dark brown ; front, crown, and nape dark grayish blue, with each feather marked by a narrow longitudinal black streak towards its centre ; back of neck blackish, with the feathers tipped by dark bluish gray ; interscapulars dark bluish gray, with transverse narrow dusky black bands ; black light gray, with black bands ; upper tail coverts the same ; shoulders bluish gray, with more or less distinct dusky bands ; under each eye, and commencing at base of bill a black irregular blotch ; side of the neck, chin, and throat white ; breast white, or slightly tinted with tawny, and variegated by fine black longitudinal streaks ; belly pale bluish gray, with small black spots, streaks, or transverse short bands ; under tail coverts tawny white, with narrow black transverse bands. Primary and secondary wing coverts a deep tawny slate color, with narrow white tips ; primary wing feathers blackish, with a tinge of hoary, which is most distinct upon the outer vanes ; inner vanes with many transverse oviform white blotches ; tips white ; secondaries blackish, with the inner vanes mottled or distinctly banded with white ; tips, and a little of edges of outer vanes, white : scapulars grayish, each with a narrow longitudinal black streak towards the middle, and with several blackish transverse bands crossing it. Tail bluish gray, with about ten transverse narrow black bands, and all the feathers broadly tipped with white ; the spaces be-

tween bands also finely, and some, at least, closely mottled with black; legs and toes yellow; claws black. Length from bill to base of tail eight inches; length of latter five inches.

Female.—Length from bill to base of tail nine inches; length of latter six inches; the bluish colors are darker; the blotch on the side of the head is not of so deep a black; and the white of the under parts is less pure.

Young.—Base of lower mandible with a slight tinge of yellow, rest of bill bluish black; cere yellow; eyes brown; head blackish brown, feathers finely edged and tipped with rufous; nape and back of neck variegated blackish brown and tawny white; lower part of neck behind, together with the interscapulars, deep blackish brown, with all the feathers tipped with rufous; back feathers black, with rufous tips. Upper tail coverts banded brown and tawny; shoulders blackish brown, the feathers tipped with rufous; blotch or streak under the eye blackish brown, and smaller than in old birds; chin and throat pure white; breast and belly tawny, with the feathers variegated by oblong black spots, which are largest on the flanks, in which situations they sometimes contain a light colored spot towards the centre of the black; many of the variegations on the thighs are somewhat arrow-shaped; under tail coverts tawny, with arrow-shaped black spots. Primary and secondary wing coverts blackish brown, with shades of bluish gray, and the inner vanes spotted with tawny or rufous; primary wing feathers blackish brown, with the inner vanes nearly crossed by rufous oviform blotches, and all finely tipped with white; secondaries marked in the same way, but with the proportion of white at tips a little greater. Tail browish black, with seven or eight transverse narrow rufous bands, which extend directly across some of the feathers, and only partially in others, tips white; legs and toes greenish yellow; claws black.

The majority of the specimens of this falcon, which I have seen, were killed near Cape Town, particularly about Wynberg and Constantia. I have also seen one which was obtained near Uitenhage, and have been told that it occurs not unfrequently in that part of the colony. Those that were procured near Cape Town exhibited the remains of small birds, rats, lizards, &c. in their stomachs.

Obs.—The first specimen of this species which I obtained exhibited an immature plumage, and, from the general appearances, I set it down, without hesitation, as the young of the *Falco Peregrinus*. More extended observations have, however, now induced me to view it as different, and to place it next to that, from the great similarity there exists between them. I am much afraid we are too anxious to discover iden-

tities ; and the search after such is materially retarding the advance of the science. It is much easier to get rid of a name than to detect the existence of two species, when embodied in one description, and therefore it appears to me best, when a doubt can justly exist as to identity, to consider the objects, especially if their habitats be very apart, as distinct species.

FALCO RUPICOLUS. *Daud. Roodevalk. Steenvalk* of the Colonists.

Falco capensis, *Shaw*, vol. 7, p. 192.—*Le Montagnard*, *Le Vaillant Ois. d'Afrique*, pl. 35.

F. capite saturate cœruleo-griseo, dorso et humeris rufis nigro maculatis; gula alba; pectore, rufo lineis longitudinalibus nigris variegato, abdomine rufo maculis nigris notato; remigibus subnigris, pogoniis internis albo lineatis, cauda rotundata, grisea fasciis nigris transversis variegata.

Male.—Bill bluish black towards tip, bluish white at base; cere yellow; eyes brown; head, together with the back and sides of neck, dark slate color, with each feather marked along the centre by a longitudinal slender black streak; interscapulars and back deep rufous, with small black spots or longitudinal streaks; shoulders and scapulars deep rufous, with irregular or somewhat triangular black spots; chin tawny; breast rufous, variegated with longitudinal black lines; belly rufous, with black spots; vent and thighs tawny, without variegations. Primary and secondary wing coverts black, with irregular tawny white transverse bands; primary wing feathers black, with the inner vanes nearly completely crossed by numerous white indentations; secondaries blackish, with both vanes crossed by irregular rufous bands. Tail dark bluish gray, with seven or eight black bands, all very narrow, except the last, which is nearly an inch in width; on the three outermost feathers of each side the black only appears upon the inner vanes, but on the rest it crosses both; all the feathers are broadly tipped with white; legs and toes yellow; claws black. Length from bill to base of tail six inches and a half; length of tail five inches.

Female.—Length from bill to base of tail eight inches; length of latter six inches; head brownish gray; back tawny rufous, with the variegations less numerous than in the male; chin and throat tawny white; breast and belly tawny brown, the former with longitudinal black streaks, and the latter with similar colored spots. In other respects nearly the same as the male.

Young.—Head and neck rufous tawny, with indistinct longitudinal black streaks; back and shoulders light rufous, with large irregular or triangular black spots; chin nearly white; throat light tawny rufous, with irregular streaks like those on the head; belly with the same ground color as breast, and streaked or spotted in front, but behind like the vent and thighs, without variegations; wing feathers all distinctly tipped with white, with the black tinge stronger, and the yellow of the feet, toes, and cere is less clear.

This hawk occurs very frequently in all parts of the colony, as well as in the country both to the eastward and northward of it. When in search of its prey it is generally seen soaring about in open country, but when disposed to rest it retreats towards mountains or rocky knolls, and there passes the night. In such situations, also, it constructs its nest, which it forms externally with dried twigs, and internally with hair and feathers: according to Le Vaillant, the eggs are of a rufous colour, and often six or eight are found in the same nest. It feeds upon the smaller quadrupeds, lizards, &c.

FALCO RUPICOLOIDES.

F. supra, subfulvus, capite colloque in longum nigro lineatis dorso et humeris fasciis brunneis transversis latis; infra flavo-albus, pectore lineis longitudinalibus nigris variegatis; abdomine lineis nigris aut maculis et hypochondriis fasciis transversis nigris; remigibus subnigris pogoniis internis albo denticulatis; cauda grisea-alba sex aut septem fasciis nigris transversis notata.

Female.—Bill bluish black at tips, yellow at base of lower mandible, and bluish white elsewhere; cere dusky yellow; eyes a grayish sand color; head and neck tawny yellow; each feather with a narrow longitudinal black streak along its centre; interscapulars, back, and shoulders with a clear tinge of rufous, and the feathers crossed by broad dark brown bands, the tips all tawny yellow; tail coverts dirty white, with broad brown bands; inside of shoulders white, with here and there a minute black streak; sides of neck tawny yellow, varied by longitudinal black streaks; breast and belly tawny yellow, with the former marked by black longitudinal streaks, and the latter by streaks or roundish spots towards the centre, and by transverse blackish bands on the sides; thighs tawny; under tail coverts yellowish white. Primary and secondary wing coverts pale fulvous, with transverse black bands; primary wing feathers blackish, and the inner vanes with many white serratures or indentations; secondaries brownish black, with transverse fulvous bands upon both vanes, and all tipped with dirty white. Tail slightly rounded,

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grayish white, with six or seven broad transverse black bands; all the feathers broadly tipped with white; legs and toes yellowish; claws black. Length from bill to base of tail nine inches; length of latter seven inches.

The only specimen of this species which I have seen, was killed on the banks of the Groene river, in little Namaqualand. In manners it resembles the last described species, and was observed to resort during the night to similar situations.

GENUS. BUTEO, Auctorum. BUZZARD

<i>Rostrum mediocre, subdebile;</i>		Beak mediocral, rather weak;
<i>nares subrotundate. Tarsi</i>		nostrils somewhat rounded.
<i>breves; acrotarsia scutellata,</i>		Tarsi short; acrotarsia scutel-
<i>Remex quarta longissima.</i>		lated. Fourth quill longest.

BUTEO JACKAL. *Jakhalsvogel* of the Colonists.

Falco Jackal, *Shaw*, vol. 7, p. 173.—*Le Rounoir*, *Le Vaillant*, p. 73, pl. 16.

B. supra nigricans, gula nigra; pectore caudaque rufis; abdomine nigra albo lineato, tarsis flavis.

Male.—Bill black, with the exception of a little of the lower mandible at its base, which, with the cere, is a dull yellow; eyes dark brown; head, neck, back, and shoulders black, or blackish brown; chin and throat of the same color; breast deep chesnut or ferruginous red; belly, under tail coverts, and thighs black, all the feathers broadly tipped with white or ferruginous red. Primary and secondary wing coverts black; primary wing feathers black, with a tint of hoary upon the outer vanes, and the inner ones towards quills broadly edged with, if not altogether, white; secondaries bluish gray, with many transverse narrow black bands, the very tips of some of the feathers are white, and in all, immediately behind that, an inch or an inch and a half of uniform clear black. Tail short, nearly even, and deep chesnut or ferruginous red, each feather marked by a black blotch close to tip, and all more or less mottled with white towards quills; legs and toes dull yellow; claws dark horn colored. Length from bill to base of tail twelve inches; length of latter eight inches.

Female.—Size rather greater than that of the male; and, if any thing, the colors are less deep and clear; and the extent of red below is usually greater.

Young.—Bill black, with a very slight appearance of yellow at base of lower mandible; cere dull yellow; eyes grayish brown; head, neck, back, and shoulders dark brown; most

of them with blackish brown centres, and tawny edges and tips. Below pale tawny or clear chesnut, with the throat and sides of the neck marked by longitudinal black blotches; primary wing feathers black, with more or less of a hoary tinge upon outer vanes; secondaries blackish brown, with the inner vanes broadly edged towards quills with grayish white; tail reddish gray, with each feather crossed by ten or eleven narrow blackish transverse bands, and with a reddish white tip; the inner vanes towards quills nearly pure white. When viewed below the whole of the feathers appear nearly of an uniform white. Length of tail eight inches.

This species occurs throughout the whole of the colony, and also, at least to a considerable distance, beyond it. It is usually seen in the vicinity of inhabited places, and generally resorts to trees or bushes about such spots, to rest during the night. The male and female are most commonly seen together, or at least in the same neighbourhood. Their food consists of the smaller quadrupeds, birds, lizards, &c. and they very often prove destructive to the poultry of the African colonists. The female builds her nest upon trees commonly at no great distance from the resorts of man; construct it externally of dry twigs, leaves, &c., internally of feathers, hair, and such like materials, and lays from three to four eggs, which are about the size of those of the common domestic hen.

Obs.—As scarcely any two specimens of this buzzard exhibit even nearly the same tints or distribution of colors, it is difficult to give such a description as will enable the reader to detect the bird if found in the intermediate stages between youth and maturity, when the diversities are most strikingly exhibited. In specimens a little advanced, the most ready means of detecting the species will be a reference to the tail; which, in all, after a certain age, has the ground color of a deep chesnut or ferruginous red; and each feather either marked by a black blotch near the tip, or by transverse black bands. When less advanced, the ground color, though it be not as just described, yet evidently inclines to that, and exhibits, particularly towards the quill, a strong ferruginous tinge. The inner vanes of the feathers, particularly towards quills, will also be found to have a considerable share of white, more or less pure, and the whole of the under parts of the body to be of a rufous or tawny tint, of different depth in different parts; and only, if at all, variegated by irregular blackish or brownish black blotches.

BUTEO LAGOPUS.

Falco Lagopus, *Gmel. Syst.* 1, p. 260, sp. 58.—*Lath. Ind.*
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Orn. vol. 1, p. 19.—*Merey Tasschenb. Deut. vol. 1, p. 37.*—*Falco Olumipes, Daud. Orn.*—*Falco Selavonicus, Lath. Ind. vol. 1, p. 26, sp. 54.*—*Buse Gantée, Le Vaill. Ois. d'Afrique, vol. 1, pl. 18.*

(To be continued.)

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
No. IV., JULY to SEPTEMBER 1830.]

A Description of the Birds inhabiting the South of Africa. By ANDREW SMITH, M.D. Member of the Wernerian Natural History Society of Edinburgh; Honorary Member of the Mineralogical Society of Jena, &c.

[Continued from p. 241.]

BUTEO LAGOPUS.*

Falco Lagopus, Gmel. *Syst.* 1, p. 260, sp. 58.—*Lath. Ind. Orn.* vol. 1, p. 19.—*Merey Tasschenb. Deut.* vol. 1, p. 37.—*Falco Plumipes*, Daud. *Orn.*—*Falco Slavonicus*, *Lath. Ind.* vol. 1, p. 26, sp. 54.—Buse Gantée, *Le Vaill. Ois. d'Afrique*, vol. 1, pl. 18.

B. fuscus ex albido vario reatricibus fuscis basi dimidia apice que albis; cera pedibusque luteis.

Male.—Head, upper part of neck, throat, breast, and thighs, whitish yellow, variegated with large oblong brown streaks; interscapulars, wing coverts, and back, brownish black, each feather with a yellowish red edging; a large transverse band or blotch of deep brown on the posterior part of belly; rump and under tail coverts whitish yellow. Tail white towards base, elsewhere uniform brown, with all the feathers terminated by dirty white; legs feathered as far as the toes; the latter and eyes brown; cere yellow; bill black. The male measures nineteen inches, and the female two feet three inches.

The *female* has less white upon the head, the neck, and the

* In consequence of an error in the printing department, the name and synonyms of this bird were made to finish that portion of the communication, descriptive of the Birds inhabiting the South of Africa, which appeared in our last number, even without having undergone the common typographical corrections.

tail; more brown upon the belly and sides; the thighs and tarsi have a greater proportion of white; and the interscapulars are edged with yellowish white.

Varies according to age, being in different specimens more or less spotted with brown, more or less varied on the upper parts with white, with a more or less distinct white stripe over eyes, and with brown and white more or less irregularly dispersed on the breast. The greater part of the belly is often white, and variegated by some small brown spots; the feathers of the thighs rayed transversely, and the tail, towards extremity, with three transverse bands, the first of which, or that next the base, is broadest; iris a beautiful yellow.

Le Vaillant only found this species amongst the woods of Antiqualand. He says it is more ferocious than the other African species of the genus, that it avoids inhabited places, and lives quite isolated. Its flight is rapid; and it often destroys partridges by suddenly pouncing upon them from the top of a tree, where it places itself to observe their motions. As I have only met with one bird resembling that just described, and had not the opportunity of examining it for more than a few minutes, I cannot pretend to say that it was actually the booted buzzard of Europe. As both Cuvier and Temminck consider the bird figured by Le Vaillant under the name of "*Buse Gantée*," as identical with the *Falco* (*Buteo*) *Lagopus* of Linnæus, I have preferred giving the description of it by the latter author, to furnishing from my own notes what could only be a very imperfect detail.

BUTEO TACHARDUS.

Falco Tachardus, *Daud.*—Le Tachard, *Le Vaillant Ois. d'Afrique*, pl. 19.

B. supra brunneus, subflavo aut rubro-albo variegatus; subtus albus, striis et maculis brunneis notatis; femoribus plerumque rubro-brunneis; cera et tarsis flavis; oculis brunneis; rostro nigro; flavo maculato.

Male.—Bill black, with the base of lower mandible, and a small portion of the under adjoining it, yellow; cere yellow; eyes brown; head, neck, back, and rump brown, with the edges and tips of the feathers light grayish brown, or reddish yellow, and the bases of many of them, particularly on the head and neck, white; also many of those of neck, back, and shoulders clouded, spotted, or crossed by irregular white streaks; under parts white, with the throat streaked by narrow longitudinal brown lines, and the breast and posterior part of belly more or less spotted with oblong or roundish brown blotches; thighs dirty reddish brown. Primary quill feathers black, with the exception of the inner vanes towards quills, which are white; secondaries brown, with blackish ir-

regular transverse bands, and the edges of the inner vanes white. Tail moderately long, slightly rounded, of a dirty grayish color, with ten or more narrow waved transverse blackish brown bands; tip of each feather dirty reddish white. Legs and toes greenish yellow; claws black. Length from bill to base of tail eleven inches; length of latter seven inches and a quarter. Wings, when folded, as long as the tail.

Young.—Above brown, verging towards blackish brown, with the bases of the feathers, of at least the head and neck, white; below brownish red, with the shafts of the feathers black; chin with a slight mottling of white. Primary and secondary quill feathers as in adult specimens. Tail feathers grayish, on outer vanes crossed by many waved or oblique narrow blackish bands; on inner vanes reddish white, or reddish brown, with similar black bands; tips of all the feathers dirty reddish yellow. Legs and toes greenish yellow; claws black; bills black, with yellow in the same situations as in the old bird, but neither so extensive nor so brilliant. Tail brownish gray, with the inner vanes crossed by eight or ten transverse tawny or reddish white bands; tips light reddish brown or dirty tawny.

Inhabits the whole of South Africa, but is much more scantily distributed than the first described species of this genus. When on the wing, the two have a considerable resemblance to each other, but they are readily to be distinguished by the smaller size of the present species.

Obs.—Like the other birds of this genus, the Tachard exhibits much variety of colouring, and it is very seldom that any two specimens are found which exactly resemble each other. The markings on the breast and belly, and the colors of the tail, are what exhibit most varieties in the bird just described. In some the belly and breast are almost divested of spots, and exhibit nearly an uniform white color; while in others both of those parts, and even the throat, are densely covered with streaks or roundish blotches, when but little difference appears to exist in the ages of the individuals. In most instances the tail is grayish brown, banded with blackish brown, yet in not a few is it deep chesnut or bright rufous, and distinctly banded transversely by numerous black lines, when no reason exists for considering them as not of equal years. In the majority of individuals of this species, whatever may be the color of the lower parts, the legs, in general, are reddish brown, but in some they are occasionally found exhibiting a white ground, variegated by brownish spots or longitudinal streaks.

BUTEO DESERTORUM.

Falco Desertorum, *Daud., Shaw, Latham.*—Le Rongri, *Le Vaillant*, vol. 1, pl. 17.

B. ferrugineus; gutture, pectore et tectricibus inferioribus caudæ subalbidis; abdomine nigro notatis; remigibus primariis nigris, cauda subtus ferruginea infra grisea indistincte fasciata; rostro et tarsis flavis; oculis rubris.

Male.—Bill and cere yellow; eyes red; head, neck, back, and belly ferruginous red; the latter with dashes of black; throat, breast, and under tail coverts grayish white. Primary quill feathers black. Tail ferruginous red above, grayish white, with indistinct transverse bands, beneath; legs and toes yellow; claws black. Size considerably below that of the Buteo Jackals, or most common South African buzzard.

Female.—Size rather exceeding that of the male, and the ferruginous tint is less deep and brilliant.

This species I have never met with, and am therefore forced to have recourse to the works of Le Vaillant. He states that it inhabits the more retired spots of South Africa; that it feeds upon rats, moles, mice, and even insects; and that its cry resembles much that of the common European buzzard. It places its nest in bushes; constructs it externally of dry twigs, internally of wool, hair, and feathers; and lays from three to four eggs.

GENUS. CIRCUS, Auct.

Rostrum mediocre, a basi aduncum; nares subovales; tarsi elongati; acrotarsia scutellata; digiti plerumque breves; Remex 3^{tus}. longissimus. Capitis latera plumarum circulo instructi disco capitali strigium persimili; cauda æquales.

Bill moderately strong, curved from the base; nostrils oviform; tarsi elongated; acrotarsia scutellate; toes for the most part short; the third quill feather longest; sides of the head with a circle of decomposed silky feathers, as in the owls.

CIRCUS LALANDII.

C. nigro-fuscus, tectricibus superioribus caudæ albis; remigibus, primariis albo, nigro-fusco et cano notatis; cauda nigro fusca cum fasciis canis instructis.

Male.—Bill black, with the base of lower mandible, and the portion of the edge of upper adjoining it yellow; cere and eyes yellow; head, neck, back, rump, shoulders, and all the under parts brownish black, verging on pure black; the bases of the feathers of the nape pure white. Primary quill feathers hoary gray on outer vanes, on inner, towards quills, white, and elsewhere grayish brown, or grayish black; secondaries with the outer vanes hoary, the inner nearly white, and both towards tips crossed by a broad blackish band; upper

tail coverts white, under ones black, with some narrowly tipped with white. Tail nearly even, black, with four transverse bands of dark bluish gray, and the tips of all the feathers grayish white; the vanes close to quills pure silky white. Legs and toes yellow; claws black. Length from bill to base of tail ten inches; length of latter nine and a half inches.

Female.—Size rather greater than that of the male, and the prevailing color is more of a dull blackish brown.

Young.—Bill and cere as in mature specimens; front blackish brown; crown and part of nape light rufous, variegated with brownish black streaks or clouds: back of neck an uniform brownish black; shoulders, wing coverts, and scapulars, brownish black, broadly tipped with pale rufous or tawny white; chin, throat, breast, and belly, tawny rufous; the two first with brownish streaks or spots, the third clouded by brownish blotches, and the last slightly marked by longitudinal brown streaks. Quill feathers with the gray less clear, with the tips tawny white, but otherwise as in old specimens. Tail blackish brown, with three distinct white transverse bands, besides the bases and tips of all the feathers being white. Legs and toes dirty yellow.

This bird frequents marshy damp grounds in the vicinity of Cape Town, as well as along both the eastern and western coasts. It feeds upon mice, rats, frogs, and lizards, and in quest of those it skims slowly along close to the surface of the ground. It builds its nest sometimes in low bushes in the vicinity of swamps, but more generally amongst rushes or reeds in the middle of marshes; constructs it externally of dried twigs, rushes, &c.; internally of wool and hair; and lays from three to four eggs.

Obs.—In very young specimens of this bird, the whole of the under parts are nearly of an uniform tawny tinge; but as the plumage develops itself, the throat and breast exhibit dark brown variegations, and in proportion as it advances in age, those become more distinct, and also appear on the belly. In many specimens irregular white spots are observed on the latter, and many of the feathers are also narrowly tipped with white. In some old birds the transverse bands of the tail are pure silky white, instead of gray.

CIRCUS SWAINSONII.

C. supra argenteus; subtus albus; remigibus nigro-cæruleis; rectricibus lateralibus albis, fasciis transversis irregularibus notatis; mediis, canis fasciis obscuris transversis variegatis; tarsis flavis; rostro nigro.

Bill black; cere yellow; eyes —; front nearly pure white; head, neck, back, rump, and shoulders light grayish

white, or pale silvery; throat, breast, belly, vent, under tail coverts, and inside of wings, pure white; upper tail coverts white, banded transversely with dusky black. Primary and secondary wing coverts gray, slightly tipped with white; primary wing feather deep dirty bluish purple, with the inner vanes towards bases white; secondaries dirty hoary gray, with the edges of the inner vanes white. Tail long, square, the three lateral feathers on each side white, and crossed by five or six irregular transverse brownish bands; the centre ones deep hoary blue, with faint dusky transverse bands, particularly on inner vanes, tips of all the feathers white; tarsi and toes yellow; claws black. Length from bill to base of tail eight and a half inches; length of tail nine inches.

I have only met with two specimens of this species in the Colony, the one was procured near Groenekloof, in the Cape District, and the other in Albany. Both of them exhibited exactly the same markings, and gave every reason to believe they were birds arrived at full maturity.

CIRCUS SUPERALIARIS.*

C. supra brunneus plumis plurimis albo marginatis, fronte, fascia supra et infra oculos, partibus inferioribusque subfulvis; rostro nigro; cera et oculis flavis; remigibus brunneis, pogoniis internis albo fasciatis.

Male.—Bill black, with a small yellow spot on each side of lower mandible towards base; eyes brownish yellow; cere yellowish; above dirty brown, with many of the feathers tipped with reddish white, particularly on the shoulders; front, chin, throat, breast, belly, vent, and a stripe over, and another below each eye, pale tawny; upper tail coverts pure white; under ones tawny; cheeks deep brown. Primary quill feathers dirty brown; the inner vanes towards quills with alternate white and brown transverse broad bands; secondaries uniform dirty brown. Tail even; the three outermost feathers of each side marked by broad alternate white and dirty brown bands; tips of all the feathers inclined to white; legs and toes yellow; claws black. Length from bill to base of tail eight and a half inches; length of latter eight inches.

Female.—

Young.—Above brown, with most of the feathers broadly edged and tipped with dirty red; front, chin, collarets, and band over and under eyes tawny; breast, belly, vent, and thighs with reddish brown longitudinal blotches; inside of wings deep chesnut. Primary quill feathers blackish brown, with the inner vanes broadly banded transversely with white. Tail nearly even, with the three outermost feathers of each side

*South African Commercial Advertiser, for May 30, 1829.

broadly banded brown and reddish tawny, middle ones brownish black, with irregular tawny bands or blotches; the tips of all the feathers reddish white; tarsi and toes yellow; claws black.

Inhabits Namaqualand and the country about Oliphant's River, as well as various parts on the eastern coast of the Colony. Of this species I have only met with two specimens, and as both of them had the tips of many of the feathers on the back, of a color distinctly differing from the prevailing one, I am disposed to consider neither of them as birds arrived at complete maturity. I should not be surprised if farther observation may enable us to identify this with the last described species.

CIRCUS ACOLI. *Witte valk. Leeuwerkvanger.*

Falco Acoli. *Daudin, Shaw. L'Acoli, Le Vaillant, tom. 1, pl. 31.*

C. supra cœruleo-griseus, subtus subalbidus pectore, abdomine et femoribus nigro lineatis.

Male.—Bill horn-colored towards base, bluish black towards tip; cere red; eyes orange red; color of plumage above pale bluish gray; beneath whitish, with the breast, belly, and thighs, finely rayed transversely with black; body slender; legs long; tail nearly even, and of a dirty brownish white tint; shafts reddish brown; legs and toes yellowish; claws black.

Female.—A third larger than the male, and the cere of a less deep red.

This species, according to *Le Vaillant*, occurs in Zwartland, and about the Twenty-four Rivers. It feeds upon mice, rats, lizards, &c. has a quick flight, and commonly soars along close to the ground, over cultivated lands and sandy deserts. The male and female are for the most part observed together; and the latter constructs her nest in small bushes, and lays four dirty white oval eggs.

Obs.—Having never met with this bird myself, I include it solely upon the authority of the naturalist just quoted, whose imperfect description I have introduced; and, great as the authority is, I cannot refrain from stating a doubt as to the existence of such a species: being disposed to consider it as the *Accipiter Musicus*, immediately before moulting.

CIRCUS RANIVORUS. *Hekvorsvanger* of the Colonists.

Falco Ranivorus, *Daudin, Shaw. Le Grenouillard, Le Vaillant, tom. 1, pl. 22.*

C. supra brunneus, rubro-albo variegatus, humeris nigro-brun-
[50]

neo, ferrugineo et albo notatis; subtus ferrugineus cauda, fasciis transversis, nigro-brunneis et griseis; tarsis flavis; rostro nigro.

Male.—Bill black, with a shade of yellow on lower mandible near base; eyes and cere yellow; front and crown brown, varied with tawny; back of neck and interscapulars dirty dark brown, the feathers edged with pure or reddish white; back and rump brown, with tawny tips; upper tail coverts ferruginous and brown, with whitish tips; shoulders mottled dark blackish brown, ferruginous and pure white; cervical collar blackish brown and white; chin, throat, and breast dirty brown, the feathers edged and tipped with dirty reddish white. Primary and secondary wing coverts blackish brown, with gray transverse bands; primary quill feathers with the outer vanes marked by alternate transverse bands of deep hoary gray and brownish black; inner with a considerable proportion of bluish gray, variegated by partial transverse blackish bands, and the inner edge of vanes, towards quills, clear white; towards tips, the feathers all nearly uniform brownish black; secondaries brown and deep bluish gray, in alternate transverse bands; inner edges of inner vanes white. Tail with about five blackish brown transverse bands, and with six deep bluish gray ones, besides bluish gray tips to all the feathers. In many of the feathers, more particularly the lateral ones towards quills, there is a strong tinge of chesnut. Legs and toes yellow; claws black. Length from bill to base of tail nine inches; length of latter nine inches.

Female.—The colors are rather less bright, but in other respects resembles the male.

This species is found about marshy situations, over the greater part of South Africa. In those it skims along close to the reeds, rushes, or long grass with which they are generally more or less supplied, and feeds on mice, rats, lizards, and such like animals as resort to these damp situations. It builds its nest sometimes on trees or bushes in the vicinity of marshes, but more commonly on the ground, amongst the luxuriant vegetation of those spots. The nest is formed externally of dried twigs or rushes; internally of hair, wool, &c., and it lays three or four white eggs.

CIRCUS LE VAILLANTII.

C. fronte vertice nucha, cervice et pectore albis aut fulvo-albis; dorso brunneo; gutture abdomineque, sub-ferrugineis; cauda brunnea fasciis transversis subfulvis variegata; rostro nigro; tarsis cera et oculis flavis.

Male.—Bill black; base of lower mandible yellow; front, chin, nape, cervix, and part of breast, white or reddish white;

the feathers of the neck and nape each with a spot of brown at tips; interscapulars and back dirty brown; upper tail coverts brown, with the tips pale tawny; throat, sides of neck, and anterior part of breast blackish brown; flanks, belly, thighs, and vent reddish brown, inclined to dirty ferruginous; shoulders variegated brown and pale tawny; inside of wings dark tawny, spotted with brown. Primary and secondary wing coverts brown, with tawny tips; primary quill feathers dark brown, with the exception of the greater part of the inner vanes, towards quills, which are light tawny, variegated by longitudinal waved dusky lines; secondaries similarly colored. Tail nearly even, dark brown, with the three outermost feathers of each side distinctly marked by transverse interrupted tawny bands; centre ones with indistinct light colored bands on inner vanes; tips of all the feathers tawny. Legs and toes greenish yellow; claws black. Length from bill to base of tail ten and a half inches; length of latter eight inches.

Female.—With the exception of being a little larger, she exactly resembles the male.

Young.—When it leaves the egg, it is covered with a white down, that in time is succeeded by an uniform dark brown plumage, which is only very slightly variegated by some streaks of bright tawny about the chin, front, and anterior edges of shoulders. The brown of the upper parts is dark and clear; that of the lower reddish brown or ferruginous. Tail feathers nearly uniform brown, with tawny tips, and some similarly colored spots towards quills. Bill blackish blue, with the lower mandible yellow at base. Legs and toes dirty yellow.

This bird is met with about the sandy flats near Cape Town, as well as in low marshy or damp situations along both the southern and western coasts. On account of its habitats and manners, it has generally been considered as identical with the last described species; but its constant and invariable characters prove it to be a separate and independent one. This is evidently the same species as is obscurely described by Le Vaillant, and stated by him to have been procured near Algoa Bay.*

Obs.—The bands on the tail are much more distinct in some specimens than in others, and appear sometimes on all the feathers, at other times only on the inner vanes of the middle ones. In some examples the white of the front, nape, cervix, and breast, is clear and abundant, whilst in others it is scarcely distinguishable.

* Histoire Naturelle des Oiseaux d'Afrique, tom. 1, p. 97.

STIRPS. MILVINA.

Rostrum mediocre a basi subaduncum. Cauda furcata.

GENUS. ELANUS.

Rostrum mediocre debile, compressum. Tarsi breves semiplumati. Acrotarsia reticulata. Ungues medio excepto interne rotundi. Remex 2^{dus}. longissimus; 1^{mus}. et 2^{dus}. fortiter interne emarginatus.

Bill moderately long, weak, and compressed. Tarsi short, half feathered. Acrotarsia reticulated. Claws, with the exception of the middle one, rounded. Second wing feather the longest; first and second strongly emarginate.

ELANUS MELANOPTERUS, *Leach. Witte Spervel* of the Colonists.

Elanus Caesius, Savigny.—*Falco Melanopterus, Daud.*—*Le Blac, Le Vaillant, pl. 36 and 37.*

E. plumbeus, subtus albidus, remigibus nigricantibus; rostro humerisque, nigris; cauda subalbida; pedibus, cera que flavis, oculis rubris.

Male.—Bill black; cere yellow; eyes red; front and eyebrows white; crown and back of neck light bluish gray; interscapulars, back, rump, and scapulars, bluish gray; shoulders jet black; chin, throat, breast, belly, vent, and inside of wings pure white. Primary and secondary wing coverts bluish gray, with the edges of inner vanes white, and some of the feathers distinctly tipped with that color; primary quill feathers dusky, hoary gray, shaded towards tips with reddish brown; secondaries bluish gray. Tail slightly forked, pale bluish white, with the outer vane of each feather faintly tinted with purple near tip; vanes dark reddish brown; legs and toes yellow; claws black. Length from bill to base of tail six and a half inches; length of latter five inches.

Female.—Size rather exceeding that of the male, and the color of the plumage less deep.

Young.—Bill black; base of under mandible, and the part of the upper one adjoining it, yellowish; front reddish white; crown and back of neck dusky, slightly variegated with very fine reddish tawny streaks; interscapulars dirty blackish blue, with fine reddish white tips; back uniform dusky blue; scapulars dirty blackish blue, with a tinge of brown, and all broadly tipped with impure white; shoulders black, many of the feathers faintly tipped with white. Primary and secondary wing coverts bluish gray, many of them with white tips; primary wing feathers blackish blue with white tips; secondaries with reddish white tips. Chin and throat white; breast and belly pale tawny or dull reddish white; thighs white. Tail a pale

dusky, hoary blue, with shades of brown; part of edges of inner vanes white; tips of feathers white or reddish tawny; legs and toes yellow; claws black.

This bird is found throughout the whole of South Africa; but is particularly abundant along the western coast, and in the country about the Twenty-four Rivers, and the Piquetberg. It frequently resorts to the habitations of the farmers, and proves highly destructive to their poultry. It builds its nest in the clefts of trees; lines it inside with down and feathers, and lays from four to five white eggs.

GENUS. MILVUS.

<i>Rostrum mediocre, debile superne subangulare. Nares obliquæ ellipticæ. Tarsi breves. Acrotarsia scutellata. Alæ longissimæ. Remex Atius. longissimus; cauda furcata.</i>	Bill moderately long, weak, and subangular above. Nostrils oblique, elliptical. Tarsi short. Acrotarsia scutellate. Wings very long. Fourth quill the longest. Tail forked.
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MILVUS PARASITICUS. *Kuikenduif* of the Colonists.

Le parasite, *Le Vaillant Ois d'Afrique*, tom. 1, pl. 22.

M. capite colloque cinereo-fuscis, nigro lineatis; dorso et humeris fuscis; mento et gutture longitudinaliter striatis subalbo et nigro; pectore et abdomine subferrugineis striis nigris variegatis.

Male.—Bill and cere yellow; eyes dark brown; head and neck pale tawny, with each feather marked in the centre by a longitudinal black or blackish brown streak which includes the shaft; interscapulars, back, tail coverts, and shoulders brown, each feather tipped with a lighter tint; chin and throat streaked longitudinally with brown and dirty white; breast and belly dirty dull rufous, with a narrow stripe of black along the centre of each feather; under tail coverts and thighs rufous; primary and secondary wing coverts blackish brown, with light tips. Primary wing feather black, mottled slightly with white on inner vanes towards quills; secondaries brown, with the inner vanes crossed by indistinct dusky bands, outer vanes sometimes of as dusky a hue as the bands. Tail slightly forked, reddish brown, with eight or nine narrow blackish transverse bands, and the tips of all the feathers reddish white: the bands are most distinct on the inner vanes, and below, on both, they are much more evident than above, being there black and nearly pure white; legs and toes yellow; claws black. Length from bill to base of tail eleven inches and a half; length of latter eight and a half.

Female.—With the exception of the rufous color being less

clear, the female, in most other respects, resembles the male; and there is not the great difference in size that occurs in many others of the family.

Young.—Bill black towards tip, light horn-colored at base; cere yellowish; irides brown; head and neck brown, with all the feathers broadly tipped with reddish white or tawny yellow; black brown, with the feathers tipped with tawny yellow or pale rufous; shoulders varied brown and tawny, with a longitudinal blackish streak along the centre of each feather; chin with longitudinal streaks of black and dirty tawny; breast with the feathers black in their centres, then tawny, and on the edges dirty rufous, the tips are also tawny; under tail coverts light tawny rufous; thighs with the centres of the feathers light brown, and the edges somewhat rufous. Primary and secondary wing coverts dark brown, tipped with tawny; primary wing feathers black, and the inner edges of inner vanes near quills much mottled with white, tips tawny rufous; secondaries blackish brown, indistinctly banded with dusky black, and all tipped with tawny. Tail grayish brown, with nine or ten blackish oblique transverse bands, and each feather broadly tipped with tawny; below the colors appear black and grayish white; legs and toes dull yellow; claws black. When it leaves the egg it is covered with a grayish down.

It feeds upon young chickens and other small birds, as well as carrion, and in search of such it evinces much courage, sometimes carrying them away from almost the very doors of farm-houses. It belongs to the migrating class of birds, and only spends the hot months of the summer in South Africa. During that period it is found very generally distributed over the whole colony, as well as over the country both to the northward and eastward of it, and usually resorts daily to the neighbourhood of inhabited places between the hours of ten and four. It breeds during its temporary residence; and “builds its nest commonly upon trees or rocks, but, when possible, prefers bushes in the neighbourhood of marshes, and lays four eggs spotted with reddish.”

Obs.—Though Temminck has set this bird down as identical with the European species, yet I have no hesitation in viewing it as quite distinct. The bill of the South African bird is invariable fine yellow, and that, with many other less evident differences, which will, doubtless, be more clearly discovered by persons who possess good opportunities of comparing specimens of both countries, appears to me to warrant the conclusion.

The following species has been met with since those of the genus to which it belongs were described :

FALCO CUVIERII.

F. subcæruleus, gutture, albo; pectore et parte anteriore abdominis rubro-albis, maculis nigris, longitudinalibus notatis; parte posteriore abdominis, crisso et femoribus, ferrugineis; tarsis flavis.

Above grayish blue, with the shafts of many of the feathers black; a transverse black band or blotch beneath each eye; chin and front of neck white; breast and anterior part of belly reddish white, and variegated by many longitudinal black blotches; hinder part of belly, vent, under tail coverts, and thighs deep chesnut or ferruginous. Primary and secondary wing coverts deep grayish blue; primary and secondary quill feathers bluish black, the inner vanes banded transversely, towards quills, with light tawny. Tail somewhat rounded, the two middle feathers about an inch longer than either of the others, somewhat pointed, and of a grayish blue color; the outer vanes, and a narrow line over each eye, tawny white; base of bill bluish white; tip black. Tarsi and toes yellow; claws black. Length from bill to base of tail seven inches; length of tail six inches.

The specimen, of which the foregoing is the description, was obtained in Cafferland, near to the Kai River, and is said to be not unfrequent there.

ACCIPITER RUFIVENTRIS. *Vide page 231.*

At the time that the description of this bird was prepared, I had not (it now appears) seen a full grown specimen. When the plumage of maturity is attained, it is above of a dark slate color, and below white, closely banded on the throat, breast, and belly, by reddish brown transverse lines. The tail is dusky brown, with four broad transverse blackish bands, and two or more blotches or partial transverse broad white lines on the inner vanes of several of the central feathers.

(To be continued.)

Contributions to the Natural History of South Africa, &c.

By ANDREW SMITH, M.D. M.W.S. &c.

No. 1.

THERE was a time when it required no trifling degree of confidence to venture upon introducing a new species, much less a new genus or genera, to the notice of the public; and much in the form of apology to satisfy the vigilant guardians of the older systems, for attempting to interfere with their too indefinite and highly confused divisions. Of late, however, observation, rather than theory, has been the guide of the Naturalist; and the simple discovery of a form, not quite akin to any described, is now regarded as all that is necessary to warrant the formation and publication of an additional subdivision.

The advantages that have resulted from this new, and certainly far more scientific method of proceeding, must have been sufficient to have convinced even the most zealous anti-reformers and the most devoted admirers of the earlier classifications, that innovation was not resorted to before it was absolutely wanted; and every day's experience is forcibly proving, that still farther ramifications are imperatively called for, wherever the student of nature is, with real and acumen, extending his research.

South Africa, it is already known, possesses several forms not to be satisfactorily classed in any of the older genera, and numbers more exist, which are quite as much, if not more at variance with them, than even those that have already been described,—some of which I shall now proceed to notice.*

* In forming new Genera, I have generally taken care to particularise the type of each, by affixing to the species upon which it has been formed as a trivial name the word *typicus*. If such a plan was to be universally adopted, many difficulties would be obviated, and the limits of Genera would be more clearly kept than they are even at present, in consequence of new forms being often compared with remote and absent species, from their discoverers not being acquainted with the type of the Genus, or with such of the species as are more nearly allied to it. To such as possess the organs of constructiveness, I would suggest the divising of a nomenclature, whereby the relative affinities of the various species of a Genus, from the typical one downwards, might be indicated by the trivial names.

Class. AVES.

Fam. FRINGILLIDÆ.

Genus, PLOCEUS.

PLOCEUS stictonotus.

P. fronte, vertice et nucha flavis; dorso flavo, maculis nigris variegato; guttere, lateribus capitis, superciliisque nigris; pectore et ventre sulphuratis.

Throat, sides of head, and eyebrows, black; front, crown and nape, fine yellow, the former with a gold tinge; interscapulars, back, rump, and shoulders, mottled yellow and black; outer vanes of primary and secondary quill feathers greenish, edged with yellow or greenish yellow; inner vanes greenish brown, broadly edged towards quills with yellow. Tail even, greenish brown, all the feathers faintly edged with greenish yellow; breast, belly, vent, and thighs, sulphur yellow. Bill

long, sharp pointed, slightly curved, and of a jet black color; eyes vermillion; legs and toes reddish brown; claws light horn colored. Length from base of bill to root of tail, three inches and three quarters; length of tail two inches and a half. Inhabits the eastern parts of the colony, particularly about the banks of the Keiskamma river, and upon the trees and bushes which skirt the edges of that beautiful stream, it builds its pendulous nest.

VIDUA.

V. nigra, apicibus humerorum scarlatinis, intus castaneis.

Above and below black; tips of shoulders scarlet, which is edged behind by a broad band of dull chesnut; inside of shoulders chesnut; secondary wing-coverts, scapulars and secondary quill feathers, edged with faint chesnut or reddish white; armillæ buff colored or pale reddish white; upper mandible pure black, lower flesh-colored inclined to red.

The only specimen I have yet seen of this bird was injured, and therefore the description is not so complete as could be wished. The tail feathers were of different lengths, so that there can be no doubt but that a part of them were progressing towards that state which characterises the birds of this genus during the summer months. It was shot in Cafferland, near the Kei river.

Fam. STURNIDÆ.

Genus, BUPHAGA.

BUPHAGA *Africanoides.*

B. supra sub-brunnea; mento et guttere sub brunneis; pectore et parte anteriore abdominis viridi brunneis; parte posteriore abdominis flavo alba; rostro coccineo.

Above dirty brown; primary and secondary wing coverts as well as primary and secondary quill feathers, brownish black; tail graduated and composed of twelve feathers of a dusky brown color; chin and throat dirty brown; breast and anterior part of belly greenish brown; posterior part of belly yellowish white variegated with brown; vent brownish. Bill between a crimson and a scarlet; legs, toes, and claws, black; round each eye a narrow circle, devoid of feathers, and of a yellow color. Length eight inches. Inhabits the country about Natal, and is commonly seen picking insects from the backs of cattle.

It differs from the *Buphaga Africana* in the colors of the legs, tail, belly, back, and rump, and also in the size of the legs.

Fam. CUCULIDÆ.

Genus, CORYTHAIX.

CORYTHAIX *Burchelii*.

C. capute cristato, crista et nucha purpureis; capistro et annulo circa oculos lucido viridibus; cervice et parte anteriore dorsi viridibus; parte posteriore dorsi, uropygio, caudaque cœruleis; ventre infimo cœruleo-nigro.

Head crested, crest and nape brilliant purple; front, and a circle round each eye, deep shining green; cervex and interscapulars light green with a shade of brownish red; scapulars, shoulders, back, rump, and tail, blue, varying in brilliancy; the tail slightly rounded. Primary quill feathers black with a tinge of blue, and the inner vanes towards the middle of the feathers crimson; chin, throat, and sides of neck, grass green; breast green with a shade of reddish; anterior part of belly dark green; posterior part and vent blackish blue; legs, toes, claws, and bill, black. Length sixteen inches, of which the tail forms nearly the half. Inhabits the country about Port Natal, and is named in honor of the indefatigable traveller and eminent botanist Wm. Burchel, Esq. author of Travels in South Africa, &c.

Fam. CINNYRIDÆ.

Genus, CINNYRIS.

CINNYRIS *Veroxii*.

C. supra subviridis vialaceo umbrata; infra cinnerea, pectore duobus maculis scarlatinis notata.

Front, crown, cervex, sides of head and neck, interscapulars, back, and shoulders, dusky green with shades of splendid violet or purple; quill feathers and tail brownish with a shade of green. Chin, throat, breast, belly, and vent, ash colored; the flanks with a tinge of green. On each side of breast immediately inside of the bend of the wing, a small scarlet tuft; bill and legs black, claws dark horn colored. Length from bill to base of tail two inches and three-quarters; length of tail two inches; length of bill one inch and a quarter. Inhabits Cafferland; and the specimen from whence the above description was taken, was given to me by Mr. VERREAUX, through whose liberality I have been put in possession of many new and interesting objects of Natural History.

Fam. HALCYONIDÆ.

Genus, ALCEDO.

ALCEDO Natalensis.

A. fronte, vertice, nuchaque cœruleis, lineis transversis violaceis variegatis; lateribus capitis subcinnamomeis; dorso cœruleo; pectore et ventre subcastaneis.

Bill and legs bright scarlet; front, top of head and nape, deep indigo blue, variegated by pale blue or violet transverse bands; sides of head and neck light reddish brown with tints of purple; back fine bright blue; shoulders blackish with a shade of blue in addition to numerous spots of clear light blue. Primary and secondary quill feathers dusky black, with the inner vanes nearly all brownish red; chin and throat white; breast, belly, and vent, pale chesnut; tail dusky blue. Length from bill to tip of tail four inches; length of bill one inch. Inhabits the banks of rivers, &c. to the eastward of Cafferland.

Fam. OTIDÆ.

Genus, OTIS.

OTIS Afroides.

O. fronte, superciliis, lateribus capitis, collo, gutture, pectore et ventre nigris; vertice et parte nuchæ nigris albo variegatis, dorso nigro lineis transversis albis aut subrubris variegato; remigibus albo et nigro notatis.

Front, eyebrows, sides of head and neck, throat, breast, belly, vent, and thighs, pure black; crown and part of nape, black, variegated with irregular waved transverse white lines; between the black eyebrows and variegated crown a moderately distinct white line, which extends backwards and meets on the nape the corresponding one of the opposite side, where they form an irregular white mark. Behind each eye and covering the openings of the ears, a large somewhat circular white blotch; between interscapulars and base of neck an irregular transverse white band. Interscapulars, scapulars, and anterior part of shoulders, black, variegated by narrow reddish white angular transverse bands; back and rump black, with narrow transverse waved white lines; posterior part of shoulders white, inside white blotched with black. Primary wing coverts black, more or less broadly tipped with white; secondary similarly colored, only the quantity of white is much greater. Primary quill feathers black, with a great portion of the inner vanes white; secondaries black, several of them blotched or striped longitudinally with white. Tail rounded, and finely rayed

transversely with black and white, each feather besides with one or more broad pure black transverse bands, and the lateral ones with broad white tips; armillæ white. Bill horn colored towards tip, yellow towards base; legs and toes yellowish; claws horn colored. Length from bill to tip of tail nearly eighteen inches.

This species is closely allied to the *Otis Afra*, or black *Koran* of the Colonists, but is at once distinguishable from it by the white markings of the inner vanes of the primary quill feathers. Its cry is also very different, being simply *kir* repeated many times in quick succession. I have never found this bird within the limits of the colony, but have seen many of them on the Bushman flats towards the Orange River. From the last circumstance, they are known to the farmers of the northern frontier by the name of "Bushman Koran*."

* Many interesting species of this genus have already been discovered in South Africa, and doubtless the catalogue will yet be extended when more attention is devoted to the examination of the individual characters of birds. The species at present known to us are—*Otis Arabs*, Cuv. Kuif kop Peauw.—*Otis ruficollis*, Cuv. red necked Peauw—*Otis Coleii*, Smith mms. black throated Peauw.—*Otis Afra*, Lin. blackKoran.—*Otis Torquata*, Cuv. brown Koran.—*Otis Vigorsii* Smith mms. Karoo Koran.—*Otis Veronii* Smith mms. blue bellied Koran.—*Otis Afroides* Smith. Bushman Koran.

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
Second Series, OCTOBER to DECEMBER, 1833.]

PROCEEDINGS OF THE SOUTH AFRICAN LITERARY
AND SCIENTIFIC INSTITUTION.

October 2.—Dr. SMITH called the attention of the Society to several South African birds which were placed upon the table, but more particularly to the following, which he described and named :

Crithagra albogularis. Above greenish grey with some dark variegation ; rump and tail coverts greenish yellow ; chin, throat, and eyebrows white ; breast and flanks dusky grey ; centre of belly, vent, and under tail coverts white ; wing and tail feathers brownish, slightly edged with dull white. Length five inches and a half.

Inhabits South Africa.

Sir WM. JARDINE, it was stated, regards this as the female of *Crithagra sulphurata*, but it was added, that they are never found associated together, nor even in the same localities.

Corythaix concolor. Forehead with a long crest, which, with the entire plumage, is greyish, faintly mottled in some places with fine, dull, reddish white transverse lines ; quill feathers dark brownish ; tail very long, hoary grey with a deep greenish gloss, particularly towards the tip ; bill, legs, and toes black. Length nineteen inches.

Inhabits South Africa, inland of Port Natal.

It was remarked that this bird differed in several points, particularly in the form of the bill, from the typical species of the genus, and that it might hereafter require to be made the type of a new division, under the name of *Corythaixoides*.

Francolinus Natalensis. Top of head, back, scapulars, shoulders, and tail, light brown, finely mottled with brownish black and tawny white, the former in the shape of longitudinal blotches upon the scapulars ; eyebrows, sides of head, neck, breast, and anterior part of belly, variegated black and white ; posterior part of belly, vent, and under tail coverts, a mixture of black, tawny white, and light brown ; bill reddish brown ; legs, toes, and claws, reddish yellow ; eyes brown. Length from bill to tip of tail twelve inches and a half.

Inhabits brushwood thickets in the vicinity of Natal.

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[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
Second Series, OCTOBER to DECEMBER 1833.]

SOUTH AFRICAN INSTITUTION.

6th Nov. The Secretary reported that the Rev. Dr. Philip had presented two interesting Zoological Specimens for the Society's Museum, — the one *Manis Temminckii*, the other *Python Natalensis*; and that both of them had been brought from the interior, eastward of Latakoo. The latter, Dr. Smith stated, was also found in the country about Port Natal; and that he had in his possession a specimen which was killed by his party whilst he was there.

At the request of Mr. Verreaux, the attention of the meeting was called to three birds which he had lately received from Madagascar, and which, from considering them new to science, he had named and characterised as follows:—

Accipiter Madagascariensis. Above dull brown with an irregular white spot on the nape; beneath white freely crossed with fine brown bars: vent and under tail coverts, pure white; tail brown above, ashy white beneath, and both surfaces crossed by eight narrow brown-black bands. Length thirteen inches and a half.*

Glareola ocularis. Head and shoulders green-black; under each eye a fine transverse white stripe; upper parts of neck and back green-grey; chin white; under parts of neck and the breast brownish grey; anterior part of belly pale chesnut; hinder parts, and under and upper tail coverts white; base of tail partly black and partly white, the tips of a few of the feathers white, the other parts pure black; bill black with the edges of the mandibles towards the angles of the mouth, red. Length about eight inches and a half.

Rallus Madagascariensis. Head and chin grey; neck, breast and belly rusty grey-brown; back rusty olive blotched with black; vent barred transversely with reddish white; under tail coverts white; point of bill and upper surface of upper mandible blackish brown, the other parts of the bill yellowish. Length eight inches and a half.

* Can this be the *Astur fasciatus* of Vigors and Horsfield? Ed.

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,

Second Series, JANUARY to MARCH 1834.]

SOUTH AFRICAN INSTITUTION.

January 8, 1834.—Dr. SMITH called the attention of the Members to four *South African* Birds and to a *Saurian* Reptile from Swan River, all of which he considered new to science, and named and characterised as follows :

Trichophorus flaviventris. Upper parts of head, back, rump and tail, olive-brown ; outer vanes of some of the quill feathers slightly edged with green ; chin and throat pale straw-yellow, breast and flanks greenish yellow, centre of belly and vent, yellow ; bill, legs, and toes, a dark horn-colour. Length from point of bill to tip of tail nine inches.

Inhabits the country near Port Natal.

Halcyon Swainsonii. Head, back and sides of neck and interscapulars dull white, the first more or less tinted with grey-brown, the last margined behind with a broad transverse black band ; back, middle of wings, and tail, blue with a green gloss, particularly the two centre feathers of the latter ; shoulders, scapulars, and points of quills, black, inner vanes of several of the outermost wing feathers white towards quills ; throat and centre of breast pure white, sides of breast, belly,

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and vent ferruginous ; bill, legs and toes light red ; claws dark horn coloured. Length from point of bill to extremity of tail eight inches and a half.

Inhabits the interior of South Africa.

Halcyon Senegaloides. Upper and lateral parts of head and of neck grey-green ; interscapulars and scapulars green ; back a clear dark blue-green ; shoulders and extremities of wing feathers black, middle of wings deep blue-green, inner vanes towards quills white ; tail blue-green ; throat, centre of belly, and vent white ; breast and sides of belly greyish, bill and legs deep red ; space between eye and base of bill black. Length nine inches.

Inhabits the country about Port Natal.

Edolius Ludwigi. Black with a shining green gloss, most distinct on the upper parts and the breast ; tail slightly forked ; bill and legs black. Length seven inches.

Inhabits the country about Port Natal.

Lamprotornis rufiventris. Head brown with a faint purple gloss ; back, shoulders, throat, and breast, a shining coppery-green, with a brownish tint ; wings brown, more or less glossed with green, inner vanes of feathers white towards quills ; tail deep shining green, belly and insides of shoulders ferruginous, bill and legs reddish brown. Length eight inches.

Inhabits the interior of South Africa.

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
Second Series, APRIL to JUNE, 1834.]

PART II.

BIRDS.

ORDER RAPTORES. *Vigors.*

BILL stout, covered with a cere at its base, its tip bent down; less strong, short or of moderate length; tarsi naked or more or less covered with feathers or down; toes four, three before and one behind; claws strong, moveable, arcuated, acute or blunt.

FAM. GYPOGERANIDÆ.*

Bill robust, strongly curved at the point; legs very long, slender, feathered to, or nearly to the tarsi, the latter scutulated or reticulated; the middle and outer toes united by a small membrane at their base; wings moderate.

Genus GYPOGERANUS. *Illiger.*

Bill robust, shorter than the head, straight at its base, curved towards its extremity; sides compressed; nostrils lateral, oblong, oblique, open, and situated in the cere; tongue fleshy and pointed; space round eyes naked; eyebrows prominent; tarsi scutulated; wings armed with three obtuse spurs; the first five quills of equal length; tail feathers twelve.

Gypogeranus Africanus. Cere, and naked space round eyes, yellow or orange; bill blackish towards base, light bluish white towards tip; eyes light brown; top of head, hinder part of neck, back and shoulders blue-grey; sides of neck, throat, and breast pale grey; belly white; vent and thighs black, most of the feathers narrowly tipped with white. Hindhead with a long crest of narrow black feathers that increase in width towards their points which are generally white; greater wing coverts and quills black. Tail rounded, the two middle feathers nearly double the length of the others, hoary grey, each with a broad black band towards point, the point itself white; the lateral

* Accipitres Gallinacées, Lesson, *Traite d'Ornithologie*, p. 14.

feathers white towards base, ashy towards points, and crossed by two black bands, the first narrow, irregular, and separating the white and grey colours; the last broad, and near to the extremity; tips of all the feathers white. Legs and toes yellowish brown; claws black. Length from bill to point of centre tail-feathers three feet five inches.

Inhabits Africa,—common in South Africa.

Falco serpentarius, Lin. *Vultur serpentarius*, Lath. *pl.* 2. *Ophiotheres cristatus*, Vieill. *Gal. pl.* 260. *Le Mangeur de Serpents*, Levaill. *pl.* 25. *Secretary Bird of the Cape Colonists.*

FAM. VULTURIDÆ.

Head, and more or less of neck, divested of feathers; the former covered with down, hair, or fleshy membranes; cere bald or hairy; tarsi robust and reticulated; claws weak; quills longer than the tail, the first quill the shortest; the fourth the longest.

Genus VULTUR. *Illiger.*

Bill thick and rather short, deeper than broad, its base covered by a cere; upper mandible straight, bent towards the point; under mandible straight, rounded, and inclined at the point; head naked or covered with short down; nostrils naked, lateral, opening diagonally towards the edge of the cere; legs strong, furnished with slightly-bent claws; the middle toe longest, and united with the exterior one at the base; the third and fourth quill feathers longest.

Vultur arrianus, Picot La Peyr. Colour brown, inclining to black and sometimes to fulvous; bill brown-black; cere violet; eyes dark brown; head and nape bare; skin bluish; the rest of neck covered with a fulvous down; lower part of neck with a colleret of long narrow delicate feathers; tarsi partly feathered; the bare portion, and the toes, greyish; claws black. Length three feet six inches.

Young.—The entire of the neck covered with down, and all the feathers of the upper parts terminated by a colour of a lighter tint.

Inhabits Egypt, India, and Europe.

Le Vautour noir d' Egypt, Savig. *Syst. des Ois. d' Egypte*, *p.* 14. *L'Arrian*, Gerard. *Tab. elem. d' Orn. vol. i. p.* 11. *Cinereous, Ash-coloured, and Bengal Vulture*, Latham, *Ind. Orn.*

Vultur fulvus, Gmel. (*Fulvous Vulture.*) Head and nape covered with dirty short whitish hairs, or bristles; lower part of cervix bare, and of a bluish colour; lower part of

throat, and middle of breast, covered with short, bristly, grey-brown feathers; rest of throat, sides of neck, and upper part of cervix, with fine whitish down, and bristles resembling those of the head. Skin, as seen through these coverings, between livid blue and purple; lower part of neck behind with a frizzy ruff of short white feathers; plumage of upper and under parts white, or a pale blossom colour; primary quill feathers black; secondaries greyish, shaded with black towards their shafts; tail rounded, and composed of fourteen black feathers, tinted with grey. Bill, legs, and toes, livid blue, with shades of dirty green; claws black; eyes light yellowish red. Length from three feet to three feet six inches; breadth from tip to tip of wings, about eight feet. Young specimens are more or less variegated with dull brown.

Vultur Kolbii, Lath. *Ind. Ornith, Supp. vol. i. pl. 10.* Le Chassefiente, Le Vaill. *Ois. d'Afrique. pl. 10* (young.) White Ass-vogel of the Cape Colonists.

Vultur auricularis. Bill strong; tip of upper mandible yellow; rest of that, and the lower greenish yellow or horn-colour; cere bluish; eyes dark brown; skin of head, and unfeathered portion of neck, vermilion or livid purple, with white variegations; the head thinly covered with a brownish white down and some black hairs; the neck bare, or with a still more scanty covering of the like materials; and on each side thereof a thin fold of loose skin, extending downwards and forwards several inches below the ears, usually about one inch in breadth, and similar in colour to the head. Throat, and middle of breast, covered with fine short black feathers; back of neck with a ruff of long narrow coarse brownish feathers, many of which are turned forwards; lower part of cervix, back, and shoulders, dark brown, many of the feathers margined with a lighter tint; quills and tail black, the latter consisting of twelve feathers. Under parts brownish black, the feathers long, narrow, somewhat curved, broadly edged with white towards their bases, narrowly with dirty light brown elsewhere; thighs with a few brownish feathers on their outer sides, but their principal covering is a fine reddish brown down; legs and toes pale bluish, with a tinge of green; claws dark horn-coloured, inclined to black. Length about three feet four or six inches; expanse of wings ten feet.

Inhabits Africa.

Vultur auricularis, Shaw, *Zool. vol. i. p. 24.* L'Oricou, Le Vaill. *Ois. d'Afrique. i. pl. 1.* Black Ass-vogel of the Cape Colonists.

Vultur Galericalus. Temm. Brow-black; wing coverts varied according to the age with brown, yellow, and whitish;
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the back scapulars and belly pure white ; cere blue ; head and neck naked, of a rosy-violet colour ; bill yellow ; tarsi flesh-coloured. Total length two feet five inches.

Inhabits Western and Northern Africa.

Vultur monachus, Gmel. Head surmounted by a tuft of brown down ; cheeks and throat covered with a black down ; circle round eyes white. Feathers of the collar long and slender ; all the naked part of the neck between the collar and the black down, dull white. The lower part of neck naked, the skin bluish and plaited ; tarsi and toes whitish : the entire of the plumage an uniform brown. Length from bill to extremity of tail about three feet.

Inhabits Africa.

Voutour chincou, *Levaill. Afriq. pl. 12.* Temm. *pl. col. 426.*

Vultur niger, Gmel. (Black vulture). Skin of head and part of neck blue, and covered with down ; the neck with a collar of long, narrow, bristly feathers ; bill black ; cere, tarsi, and toes bluish. The body, the wings, and the tail, black ; the eyelids grey-white. Total length three feet and a half. In birds of the first, second, and third years, the plumage is more or less mixed with brown.

Inhabits Europe and Africa.

Egyptus Niger, Savigny, *Oiseau d' Egypt et de Syrie.*

Vultur occipitalis, Burchell. (Tufted Vulture). Bill and feet flesh-coloured ; bare space round the eyes white ; eyes of the colour of burnt umber ; top of the head covered with a white feathery wool, which, at the back part, is longer and stands in a reversed position. Colour above blackish brown ; the thighs and under-parts of body and neck white ; quill feathers and tail black, the secondaries white towards their extremities. The part of the neck which is bare, together with the base of the beak, white. Total length two feet ; expanse of wings seven feet.

Inhabits Africa.

GENUS NEOPHRON. Savigny.

Bill slender, long and rounded, swelled towards the point, and hooked ; lower mandible shorter than the upper, and truncated ; nostrils oval and open ; cere broad ; cheeks and throat naked ; tarsi naked, slender, and reticulated ; third quill feather the longest. Tail composed of fourteen feathers.

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Neophron Ægyptiacus, Savig. Bill horn-coloured; cere, forehead, space round the eyes, cheeks, ears, chin, and part of the throat, bare, and of a yellow or saffron colour; eyes light reddish brown; plumage white, usually tinted with yellow; feathers of nape narrow, elongated, and pointed; primary quill feathers black; secondaries greyish black, with the outer vanes more or less broadly margined with white; tail fan-shaped, and pure white; legs and toes dirty greenish white, sometimes inclined to reddish yellow; claws dark horn-coloured. Length from one foot ten inches to two feet two inches; expanse of wings about five feet.

Female.—A little larger than the male, but of the same colour.

Young.—Black or brownish black, streaked or spotted with dull white or tawny.

Inhabits Africa.

Vultur Percnopterus, Gm. L' Ourigourap Le Vaill. *Ois d' Afriq.*, pl. 14. Le Percnoptere, Cuv. *Reg. Animal.* White Crow of the Cape Colonists.

Neophron niger, Lesson. Plumage brown, variegated with fulvous on the thighs; tarsi black; the top of the head, the cheeks, and the front of the neck, entirely bare; the lower part of neck and the posterior portion almost to the hind-head, covered with a close greyish down. Size of the last.

Inhabits Senegal.

Cathartes monachus, Temm. *pl. col.* 222.

Neophron carunculatus, Smith. Bill greenish black towards base, dark horn-coloured at tip; eyes dark brown; front, crown, sides of head, and upper part of throat bare, and of a purple colour, with eight or ten small white transverse caruncles on the latter. Nape, upper part of neck, and lower part of throat, covered with a light reddish brown down, and between the latter and the caruncles already mentioned, an oval patch of black feathers; lower part of cervix, interscapulars, and back, deep brown; the feathers all edged and tipped with a lighter tint; shoulders nearly the same. Primary wing feathers blackish, with a greyish tinge towards quills; secondaries blackish brown, with the colour of the tips and edges lighter than that of the centres; thighs covered with a white down in addition to some long brown feathers on the outer sides; legs and toes pale greenish blue; claws black. Length two feet two inches; breadth from tip to tip of wing five feet six inches.

Inhabits Cafferland and the country about Natal.

Obs. This may perhaps be identified with the preceding.

Genus GYPAETUS.

Bill large, robust, compressed on the sides, rounded above and hooked towards the point; lower mandible short, straight, and obtuse; cere basal, covered with strong hairs directed forwards; nostrils oblique, oval, concealed by the down on the base of bill; top of head covered with down; tarsi short, thick, feathered; claws robust, sharp, the inner and hinder ones much curved; the third quill feather the longest; tail composed of twelve feathers.

Gypaetus barbatus, Cuvier. Bill black; head and cervix dirty sallow white; circle round the eyes, and space between them, and bill, covered with a deep-black hair, as well as each side of lower mandible, at base, also some similar hair under the bill, which is in the form of a large tuft pointing forwards; irides of two colours, viz.: yellow towards pupil, and fine red towards circumference. Front and part of sides of head behind eyes, as well as base of lower mandible, covered with a dense white down; rest of head and cervix dusky white, faintly tinged with rufous; back and shoulders dusky, inclining to black, the centres of the feathers being more or less distinctly, an obscure cinereous black, and the edges clear black, the shafts white. Primary and secondary quill feathers, together with the tail, more or less greyish; throat, breast, belly, and thighs, clear or dull rufous; toes somewhat granulated, and dusky black. Length about three feet.

Inhabits Africa and Europe.

Vultur barbatus et barbarus, Lath. *Index Orn.* *Vultur aureus*, Briss. *Orn.* *Arend of the Cape Colonists.*

FAM. FALCONIDÆ.

Head entirely, or in a great measure, covered with feathers; bill strong, hooked, and furnished with a cere; border of upper mandible even, or toothed; claws stout, very acute, much curved, and retractile.

Genus AQUILA.

Bill very strong, straight near base and curved towards the point; cere hairy; nostril elliptical and transverse; the third, fourth, and fifth quill feathers the longest; tarsi covered with downy feathers to the toes; tail composed of twelve feathers.

Aquila nœvia, Linn. Body, head, wings, and tail, shining brown of different tints, lighter towards the rump and thighs; the feathers of the tarsi and under tail coverts are light brown; tail tipt with light rufous; bill black; eyes, cere, and toes, yellow. Length twenty-two inches.

Young.—Colour deep shining brown; wing coverts towards points with large oval greyish white spots; under tail coverts and secondary quill feathers terminated by large spots of the same colour, and the flanks and thighs are sprinkled with others of a smaller size.

Inhabits Africa and Europe,—common in Egypt.

Le petite Aigle, Buff. L'Aigle tachete, Cuv. *Reg. Animal.*

Aquila heliaca, Savig. Top of head and occiput rufous; the feathers edged with a brighter tint; body above, shining brown; beneath, black-brown, with the exception of the belly which is rufous-yellow; part of the upper wing coverts white. Tail grey-ash with irregular black bands, each feather with a very broad black band towards its point, and tipt with yellowish. Eyes whitish yellow; nostrils linear, with the upper edge notched. Length about two feet and a half; female three feet.

Young.—Head and neck straw-coloured and whitish; upper parts of neck and back brown, lightest along the middle of the feathers; the under parts straw-coloured and striped longitudinally with brown-black.

Inhabits Egypt and Europe.

Aigle de Thebes, Savig. *Ois. d' Egypt.* Falco Imperialis, Nam. *Aquila mogilnik*, Gmel.

Aquila Vulturina, Shaw. Bill blackish blue, verging here and there to a light horn-colour; cere deep yellow; eyes reddish brown; space between them and bill pretty thickly set with black bristles; back and tail coverts white; plumage elsewhere deep black; tail more rounded than in the foregoing species; toes deep yellow; claws black. Length from bill to base of tail seventeen inches; length of latter twelve inches; expanse of wings about seven feet.

Young.—Head, back, and sides of neck, clear reddish tawny, inclined to a pale chesnut, the interscapular and shoulder feathers dirty brown, edged, and strongly tipt with tawny; the back a mixture of chesnut, brownish black, and dirty reddish white. Below reddish brown of various tints, with the centres of feathers blackish or blackish brown; legs light tawny.

Inhabits South Africa.

Falco Vulturinus, Shaw, *Zool. vol. vii. p. 58.* Le Caffre, Le Vaill. Dassie-vanger and Berghaan of the Cape Colonists.

Aquila rapax. Bill livid blue towards base, dark horn-coloured at tip; cere yellow; eyes reddish brown; front, crown, neck, interscapulars, and back, pale tawny, with here and there brownish variegations; tail coverts tawny or dirty white; shoulders varied tawny and dark brown; scapulars blackish brown, more or less distinctly tipt with reddish white. Primary

quill feathers blackish brown, some of them edged on outer vanes with tawny, all tipped with reddish white; secondaries dark dirty brown, narrowly edged and tipped with reddish white; primary quill feathers black; secondaries blackish brown on the outer vanes, on the inner greyish, variegated by many transverse dark bands; tips reddish tawny. Tail rounded, brownish grey, and much mottled by partial indistinct transverse narrow dusky black bands; tips of feathers all tawny; under parts tawny with brown variegations, particularly numerous on the flanks and anterior part of the belly; thighs dark ferruginous; toes yellow; claws dark horn-coloured. Length about two feet four inches.

Young.—Prevailing colour chesnut, without the brown variegations of the older bird; feathers of the head and back of neck tipped with light tawny. Tail dirty brownish grey, tipped with reddish white; cere and toes dull yellow; claws black; eyes yellow.

Inhabits South Africa,—common.

Falco rapax, Temm. *pl.* 455. *Falco nævioides?* Cuv. *Aquila choka*, Smith. *South African Quarterly Journal*, vol. i. p. 114. *Chok of the Cape Colonists*.

Aquila Bellicosa, Daudin. Bill bluish at the base, black elsewhere; eyes fine brown; space between them and bill thinly covered with black bristles; plumage of hindhead a little elongated, so as to form a very slight crest. Feathers of head, and of back and sides of neck, variegated blackish brown and white; interscapulars, back, tail coverts, and shoulders, more or less deep brown; with the tips of all the feathers, but particularly of those of the latter, dusky white; throat, breast, belly, and legs, pure white. Primary wing feathers black, tipped with white; secondaries alternately banded with dusky blackish brown and dull hoary grey, all broadly tipped with white. Tail slightly rounded, with each feather banded more or less directly across by black and hoary grey, the latter usually passing to white towards the inner margins of the inner vanes, all distinctly tipped with white. Tarsi and toes a light livid green, inclining sometimes to yellowish green; claws deep black and much curved. Length from bill to base of tail twenty inches; length of latter twelve inches; expanse of wings about eight feet and a half.

Young.—Above blackish brown; throat and breast nearly black; belly and legs dull white with black blotches.

Inhabits South Africa.

Falco Armiger, Shaw. vii. 57. Le Griffard, Le Vaill.

(To be continued.)

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
APRIL to JUNE, 1834.]

AFRICAN ZOOLOGY:

By DR. SMITH.

Continued from page 256.

Aquila coronata. Crested, crest white with some brown variegation towards shafts of feathers; head, neck, breast, belly, under tails coverts, and legs, white, the latter blotched particularly on outer-sides with black-brown. Back of the neck faintly spotted in some specimens with brown, and the under tail coverts obscurely banded with the same colour; back brown-grey, the feathers margined with white; upper tail coverts white, broadly banded with brownish black; shoulders dull brown, all the feathers margined with white and most of them blackish towards shafts; scapulars grey-brown, margined with white. Primary wing coverts black, margined with white; primary quill feathers dull brown, banded with black, the tips black; secondary quill feathers dusky grey, banded with black, tips white; the inner surfaces of wings principally white. Tail black with three or four hoary grey bands, tips of all the feathers white. Bill black, base of lower mandible yellow; toes yellow; claws black. Length of male thirty-three inches, of female thirty-seven inches.

Young.—Above black clouded with brown; upper tail coverts tipped with white; beneath variegated freely with pale rufous, in somewhat transverse bands on breast and belly; legs white, closely spotted with black; tail black, with two broad hoary bands, and the tips of feathers tawny white. Crest black, the feathers tawny towards quills.

Inhabits South Africa and Guinea.

Crowned Eagle, Edwards, *pl.* 224.

Obs. This species has generally been confounded with the last; it is, however, perfectly distinct. In the *Bellicosa* the wings are longer, the tail has a much greater number of bands, and no crest exists either in young or old specimens. In the present species the head is much smaller and rounder than in the last, the base of the lower mandible is, at all ages, of a yellow colour; and when the wings are folded the points of the primary feathers scarcely reach beyond those of the secondaries.

GENUS HALIAETUS. *Savigny.*

Bill strong, convex above and hooked at the point; nostrils lunated, transverse; cere hairy; tarsi half-feathered, scutellated before, reticulated behind; tail rounded or cuneiform.

Haliaëtus blagrus. Bill brownish; eyes deep brown; head, neck, breast, belly, and thighs, satin white, with the feathers of the head and back of the neck edged with brown. Scapulars and secondary wing coverts light greyish brown; tail the same, with the exception of the tip which is white. Primary wing

feathers blackish; outer vanes of secondaries like the scapulars; legs and feet yellowish; claws black. Length about two feet.

Inhabits South Africa,—very rare.

Falco blagrus, Shaw, *Zool. Le Blagre*, Le Vaill. *Afriq. pl.* 5.

Haliaëtus vocifer. Bill black; cere, and space between it and eyes yellow, and thinly covered with black hair; "eyes reddish brown." Head, neck, interscapulars, anterior part of back, and breast, pure white; the feathers of the head, back of neck, and interscapulars, with their shafts, brownish red; belly and thighs deep chesnut. Primary and secondary wing coverts, as well as primary and secondary wing feathers, deep shining black; tail slightly rounded, and pure white; legs and toes deep yellow; claws black. Length from bill to root of tail twenty-five inches; length of latter eight inches.

Young.—Brown above, white beneath, variegated more or less with longitudinal brownish black stripes or blotches.

Inhabits South Africa,—along the coasts and near the mouths of rivers.

Falco vocifer, Shaw. *Le Vocifer*, Le Vaill. *pl.* 4.

GENUS HELOTARSUS. *Smith.*

Bill robust, compressed, curved from the base, and strongly hooked; cere smooth; lores hairy; nostrils semilunar, vertical. Tarsi robust, short, covered with feathers below the joint, the bare portion with rough elevated scales; toes scutellated towards claws. Tail even, and shorter than the wings; second quill feather the longest. Form robust.

Helotarsus typicus. Tip of bill black; base and the cere orange; eyes deep red; head, neck, and under parts, clear black; interscapulars, back, and tail, clear deep chesnut; shoulders greyish brown; primary and secondary wing coverts black; primary wing feathers with both vanes grey, and the inner ones edged near quills with white; secondaries cinerous grey, with the inner vanes edged with white; and each feather broadly tipped with fine shining black; scapulars black; tail slightly rounded, and the wings, when folded, about three inches longer than it. Tarsi reddish, more or less inclined to orange; toes similarly coloured; claws black. Length from bill to base of tail seventeen inches; length of latter five inches and a half.

Young.—Cere bluish; bill horn-coloured; feet and tarsi yellowish; plumage brown, lightest on the head and neck, most of the feathers with the edges and tips of a fainter hue; primary and secondary wing feathers blackish, tinged with grey; tail blackish brown; claws black.

Inhabits South Africa and Senegal.

Falco ecaudatus, Shaw, *Zool.* Terathopius ecaudatus, Lesson. Le Bateleur, Le Vaill. *pl.* 7 & 8.

Genus CIRCAETUS. Vieillot.

Bill strong, straight at the base, convex, compressed, and hooked at the point, edges nearly straight; cere hairy; nostrils roundish; tarsi moderate, elongated, naked, and reticulated; toes short; wings as long as the tail; the latter graduated, cuneiform, and consisting of twelve feathers.

Circaëtus cinereus, Vieill. General colour dull grey, verging in some places to rufous. Primary quill feathers black; tail above, brown with five white transverse bands; beneath, grey with the same number of pure white bands; tarsi and toes yellowish black. Length nearly twenty-two inches.

Inhabits Senegal.

Circaëtus thoracinus, Cuv. Bill dark horn-coloured; eyes fine yellow; head, together with the back and sides of neck, blackish brown, the former often with a slight tinge of grey; interscapulars, back, tail coverts, and shoulders, blackish brown, each feather more or less distinctly tipped with a dusky or pure white; throat variegated black and white; breast pure black or brownish black; belly, under tail coverts, and thighs, pure white. Primary quill feathers black, with the exception of the greater portion of the inner vane of each, towards its base, which is white; secondaries marked by transverse black and greyish, or greyish white bands, and distinctly tipped with white. Tail nearly even and composed of twelve feathers, each of which has, or may be said to have, white, or grey and white as the ground colour, and is crossed more or less completely by three broad black bands. When the two colours first mentioned occur in the same specimen, the grey occupies only the outer vanes towards the tips, and sometimes a little of the inner ones near the shafts, whilst the white appears in all other situations. When viewed below the whole ground colour appears a pure white, and the three transverse bands a dusky black. Legs and toes livid white, with a tint of greenish; claws black. Length from bill to base of tail fourteen inches; length of tail nine inches and a half.

Young.—Dull earthy brown; second year, brownish above, and white mottled with black blotches beneath; throat and anterior portion of breast black.

Inhabits South Africa.

Circaëtus pectoralis, Smith. *South African Quarterly Journal*, vol. i.

Circaëtus Bacha. Head above black; hindhead with a transverse crest, the feathers white towards their bases, elsewhere black; black dull earthy brown; upper tail coverts sprinkled with white spots: shoulders blackish brown, sprinkled with white spots; quill feathers black, tipped with white, the primaries with a broad band of greyish brown towards points, the inner vanes towards quills white, undulated with black. Sides of neck, and throat, brown or brown-black; under parts dull brown, freely mottled with white spots; under tail coverts brown, banded with white. Tail rounded, black, and crossed towards point by a broad grey-white band clouded with dusky; all the feathers finely tipped with white. Bill lead-coloured; lower mandible towards base, and the naked space round eyes, yellow. Tarsi and toes yellowish; claws black. Eyes deep brown-red. Length of the male twenty-three inches, of the female twenty-eight inches.

Inhabits South Africa, Java, and India.

Falco Bacha, Daud. *Orn.* Le Bacha, Le Vaill. *pl.* 15.

Obs. When I classed this bird some time ago in the genus *Cymindis*, I had not an opportunity of examining its characters, but was guided entirely by the example of Mr. Stephens. Since that I have met with several specimens, and have satisfied myself that it is closely allied to the *Circaëti*, and more entitled to be ranked in that genus than in *Buteo*. The reticulated tarsi and its general form bespeak the affinity.

Genus MORPHNUS. *Cuvier.*

Bill large, almost straight, convex above and curved at the point; nostrils elliptical; tarsi slender, long, naked, and scutellated, or covered to the toes; wings shorter than the tail; fourth quill feather the longest.

Morphnus albescens. Bill lead-coloured; eyes fine yellow; head with a small crest; the whole plumage white, clouded with blackish brown upon the mantle, and soft to the touch. Tail rayed transversely black and white; primary wing feathers with the outer vanes brownish, and the inner ones rayed; claws a leaden colour. Length about two feet six or eight inches.

Young.—Brown more abundant in the plumage; all the shoulder feathers edged with rufous.

Inhabits South Africa,—Autenaqualand.

Falco albescens, Shaw, *Zool.* vol. vii. p. 93. Le Blanchard, Le Vaill. *Ois. Afriq.* *pl.* 3.

Morphnus occipitalis. Above blackish brown, inclining to black, in old individuals; below the same colour, only of a darker tint; head and crest blacker than the other parts; the latter composed of several feathers, most of them of different lengths, the longest between five and six inches. Primary and

secondary wing coverts blackish brown, with more or less of the inner vane of each feather white; primary wing feathers white towards quills, blackish brown elsewhere; in the outermost ones the white occurs only upon the inner vanes, in the next to them it occupies both vanes, and in the still more internal, the white is crossed by black bands; outer vanes of secondaries an uniform dusky brown, inner ones brown and dusky or pure white in alternate transverse bands. Tail slightly rounded, each feather marked with white; greyish white, or reddish white and black alternate bands; the number of the first description is usually three, besides some irregular ones or only spots towards quills; the bands seldom extend completely across, but have the extremities on each side commonly margined with the same black as the other bands, and between the last light-coloured one, and the tip nearly two inches of uniform black; bill and claws black; cere and toes yellowish. Length from bill to base of tail nineteen inches; length of latter nine inches.

Young.—Plumage brown, feathers margined with rufous.

Inhabits Africa.

Falco occipitalis, Daudin, *Ois.* ii. p. 40. Shaw, vii. p. 59. Nisser Tokoor, Bruce. Le Huppard, Le Vaill. *Ois. Afr. pl.* 2. Kuifkop Valk of the Colonists.

Genus POLYBOROIDES. *Smith.**

Bill compressed particularly towards culmen, slightly arched from base, moderately hooked at the point; nostrils longitudinal, linear; cere smooth; sides of head to some distance behind eyes bare. Tarsi long, slender, laterally compressed and reticulated; toes long and slender, the middle one connected to the outer by a slight web at base; claws long, slender, and much curved. Wings nearly as long as tail; the fourth and fifth feathers the longest.

Polyboroides typicus, Smith. Head, neck, and breast, dark blue-grey; back scapulars and shoulders light grey, variegated with very fine undulating dull white lines; hinder portion of back, upper and under tail coverts, belly, thighs, and insides of shoulders, white, with fine transverse black lines; interscapulars, each with a black blotch near its point. Primary wing coverts dark grey tipped with white, and with a broad black band near the point. Primary wing feathers black, the outer vanes towards quills grey, the inner ones white, undulated with black, tips white. Tail dark green-black, crossed by a distinct broad white band, finely undulated with black near the extremity, and by some irregular ones toward the base; the tips of all the

*South African Quarterly Journal, March 1830.

feathers white. Bill dark horn-coloured; cere and base of lower mandible yellow; tarsi and toes yellow-brown; claws black. Length two feet four inches.

Inhabits South Africa and Madagascar.

Falco gymnogenys, Temm, *pl.* 307. *Gymnogenys Madagascariensis*, Lesson.

Obs. Two specimens from Madagascar which I have examined, differed only from the South African one in my possession, by being smaller and of a lighter colour. They were probably male birds, and mine is a female.

Fam. ACCIPITRINA.

Bill convex, curved from the base, hooked, upper mandible with a more or less distinct festoon on its edge, lower mandible shorter and obtuse; nostrils almost oval; tarsi nearly or completely naked, slender; claws large, very sharp; wings shorter than the tail, fourth quill feather the longest.

Genus ACCIPITER. *Ray.*

Tarsi generally slender, scutellated; body slender; claw of inner toe very strong; nostrils rounded, transverse; wings extend a little beyond the base of tail, the latter rounded, graduated or slightly forked.

Accipiter monogrammicus, Lesson. Ashy grey; throat white with a longitudinal black line; belly finely striated with brown; tarsi and cere reddish.

Inhabits Senegal.

Falco monogrammicus, Temm. *pl. col.* 314.

Accipiter polyzonus, Lesson. Bill and cere brown, the base of the lower mandible, and the festoon of upper, yellowish; a narrow space round eyes naked; plumage above an uniform ashy brown; throat whitish, finely rayed transversely with brown; anterior part of neck, breast, and belly, dull white, regularly rayed with transverse brown or pale rufous bars; vent and under tail coverts white, with some fine transverse brown lines; wing feathers light brown, banded with dark brown; inner vanes marked with white towards quills. Tail long, even or slightly forked, beneath ash-white with transverse brown bands, above brown with darker transverse bands, and the inner vanes of central feathers with two or three narrow white bars; the tips of all the feathers white. Tarsi long, and with the toes yellow; claws black. Length sixteen inches and a half.

Inhabits South Africa.

Falco polyzonos. Temm.

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Accipiter niger. (Black Sparrow Hawk.) Colour a fine black; the feathers of nape and upper part of neck white at their bases; tail feathers above, each, tinted with three white spots, and beneath, with four pure white spots, which form transverse bands when the tail is spread; the first band towards the root, the next on the second-third of the tail, and the last a little distance from the extremity. Primary quill feathers grey-white with some small black spots variegated with ashy; secondaries black; eyes yellow; cere and feet orange. Length nine inches.

Inhabits Senegal,—very rare.

Accipiter Gabar. Bill dark horn-coloured; cere deep red; eyes light crimson; head, neck, interscapular, back, and shoulders, dirty brownish or reddish grey; chin, throat, sides of neck, and breast, light bluish grey or pale slate colour; belly and thighs banded lightish black and clear white. Primary quill feathers nearly an uniform dark brown on the outer vanes, whilst the inner ones are marked by alternate bands of blackish brown and dirty light white. Tail slightly rounded, feathers brownish black, crossed by three transverse bands, which appear when viewed above, of a pale dusky white or greyish white, and when seen below, of a pure white; the tips of all pure white; legs and toes red; claws horn-coloured. Length from bill to base of tail six inches; length of latter six inches and a quarter.

Young.—Bill nearly as in mature specimens; cere and eyes yellow; head and neck variegated blackish brown and rufous, the latter most abundant on the sides of the last named part interscapulars and back an uniform dark brown, with the exception of some very slight variegations, occasioned by many of the feathers being indistinctly tipped with rufous; shoulder feathers dark brown, tipped and edged more broadly with light rufous; tail coverts white. Chin, throat, and breast, light rufous, more or less variegated by longitudinal stripes of dark brown or blackish brown; belly and thighs marked by alternate narrow bands of dirty black and pale rufous; primary and secondary quill feathers nearly as in old specimens; tail blackish brown, crossed by four white bands, besides each feather having a white tip and some spots of a like colour near quill; legs and toes yellow; claws horn-coloured.

Inhabits South Africa and Senegal.

Falco Gabar, Daud. *Le Gabar*, Le Vaill. *pl.* 33.

Accipiter Tachiro. Bill bluish black, with a small yellowish spot on the edge of the tooth of the upper mandible, and another opposite to it, on base of lower; cere yellow; upper

parts dull brown ; the feathers of nape all white towards quills ; chin and throat pure white ; sides of neck white, with narrow transverse brown bands ; breast and belly white, banded transversely with brown, the bands few towards the middle, but numerous on the sides ; under tail coverts white, irregularly crossed by a few narrow brownish lines ; thighs tawny white, with broadish transverse brown bands. Primary wing feathers brown, banded on the inner vanes by black towards their tips, and by black and nearly clear white towards quills ; secondaries the same as primaries, with the exception of the white being more abundant on the inner vanes. Tail slightly rounded, of a light brown colour, and crossed by four broad blackish bands, the tips of all the feathers more or less white ; legs and toes yellow ; claws black. Length fourteen inches and a half ; the female nineteen inches and a half.

Young.—Above brown, feathers edged and tipped with rufous ; throat white, with a longitudinal black stripe ; under parts white with longitudinal black blotches.

Inhabits South Africa.

Le Tachiro, Le Vaill. *Ois. d' Afriq. pl.* 29.

Accipiter Francesii. Head and hinder part of neck blue-grey ; back and shoulders dark slate-colour ; sides of neck light blue-grey ; under parts and insides of shoulders pure white ; wing feathers brownish black, inner vanes near quills white with narrow transverse black bands. Tail, above a dark slate colour with a greenish tinge, the lateral feathers of a lighter tint with their inner vanes tinged brown, beneath white, more or fewer of the feathers with five or six transverse black bands on the inner vanes, the outer feather of each side with the bands scarcely perceptible, the tips a dull white. Upper mandible horn-coloured, lightest towards the point ; under mandible yellow ; legs and toes yellow ; claws black. Length from bill to tip of tail eleven inches.

Inhabits Madagascar.

To Lady Frances Cole I am indebted for the only specimen I possess of this apparently undescribed species,—and the name it bears in the South African Museum is an indication of the high respect entertained for Her Ladyship as a well known and zealous Patroness of Science.

Accipiter musicus. Head, neck, and breast, light bluish grey ; back and scapulars dark slate-colour ; upper tail coverts white ; shoulders silver grey, finely mottled with black. Primary wing coverts hoary, inclined to greyish black ; secondary coverts white, mottled with narrow tortuous black lines. Primary wing feathers brownish black, variegated on inner vanes towards quills with lines or streaks of white ; secondaries pure

white, here and there dotted or finely streaked with black; belly, thighs, and under tail coverts, finely banded black and white. Tail slightly rounded, the two centre feathers blackish grey, the rest blackish, or blackish grey and white in different proportions, the latter particularly abundant in the two outermost ones of each side, all, with the exception of the two middle ones, broadly tipped with white. Upper and lower mandibles at base orange-coloured, elsewhere black. Cere, tarsi, and toes, red; claws black. Length twenty inches.

Young.—Bill blackish, with a little of the base of each mandible yellow; cere greenish yellow; eyes greyish yellow, inclined to pure yellow; head, neck, and back, brown, the feathers of the two former white towards quills; tail coverts white, with a triangular brown spot near the tip of each; shoulders brown, with the feathers edged and tipped with reddish white; belly, thighs, and under tail coverts, marked with alternate broad irregular brown and white bands. Primary wing coverts brown, tipped with white; primary wing feathers reddish brown, banded with black, the outer vanes tinted with grey; secondaries bluish grey, banded with black, and tipped with white; tail with reddish grey and blackish brown transverse bands, the former four in number; legs and toes somewhat flesh-coloured; claws black.

Inhabits Africa,—common in South Africa.

Falco Musicus, Daud. *Orn.* p. 116. Le Faucon chanteur, Le Vaill. *pl.* 27. Blaauwe Valk of the Cape Colonists.

Accipiter rufiventris, Lath. Head, upper part of neck, back, and upper tail coverts, blue-grey or ashy brown; sides of neck, throat, breast, anterior parts of belly and thighs, light rufous; hinder part of belly, vent, and under tail coverts, pure white. Wing feathers dirty brown, the inner vanes banded with black and blotched towards quills with white. Tail above brown-black with four brownish grey transverse bands, beneath white with dark brown bands; tips of all the feathers white. Bill black, the festoon and base of lower mandible yellow; legs, toes, and cere, yellow; claws black. Length of male ten inches, of female fourteen inches.

Young.—Above brown, the feathers of head, neck, and shoulders, margined with rufous; beneath light rufous or rufous-white, variegated with slender longitudinal streaks.

Inhabits South Africa.

Accipiter minullus, Lath. Head, neck, and back, a dark slate colour; upper tail coverts white, spotted or banded with black. Chin and throat white, finely mottled or indistinctly rayed with black; sides of breast and belly rufous, middle of

breast and anterior part of belly, pure white, all rayed transversely with narrow brown-black bands; hinder parts of belly and under tail coverts pure white. Primary wing feathers brownish, the inner vane with transverse dusky black bands; secondaries brownish, inner vanes edged with white and crossed by black bands. Tail slightly rounded, the outer vanes of feathers brown-black, spotted or irregularly banded with reddish brown; inner vanes black, and partially crossed in three different positions by white; tips of all the feathers white. Bill black; cere, legs, and toes, yellow; claws black. Length of male ten inches, of female twelve inches.

Young.—Above brown, feathers margined with rufous; beneath rufous, blotched or banded transversely with black-brown; throat but slightly spotted.

Inhabits Africa,—forests of South Africa.

Le Minule, Le Vaill. *pl.* 34.

Accipiter melanoleucus, Smith. Above black with a faint tint of brown; below deep black. Primary quill feathers black, the inner vanes towards quills spotted or irregularly banded with white; secondaries dusky brown clouded with black, and the inner vanes spotted with white; scapulars brown with some white blotches on both vanes. Tail slightly rounded, black, with four or five tawny brown bands, the outer feathers more or less blotched with white towards quills, the centre ones without variegations. Bill black, with the festoon and a spot on the lower mandible yellow; legs and toes greenish yellow; claws black. Length about twenty inches.

Middle age.—Above black, beneath white blotched more or less with black.

Young.—Head rufous, longitudinally streaked with brown; back brown, the feathers margined with rufous; under parts rufous, variegated with longitudinal brown stripes. Tail slightly rounded, each feather with four or five transverse black bands, and the spaces between them brown, finely mottled with white; some of the black bands are somewhat arrow-shaped, with their distal edges margined tawny white.

Inhabits South Africa.

Accipiter melanoleucus, Smith, *South African Quarterly Journal*, vol. i. p. 229.

Obs. Naturalists who see reason for separating the larger and more robust species from the smaller and more slender ones, would rank this as an *Astur*.

Accipiter Madagascariensis, Verreaux. Above dull brown with an irregular white spot on the nape; below white, finely barred with brown-black; vent and under tail coverts pure

white. Wing feathers brown with transverse black bands, inner vanes towards quills white; insides of shoulders white, barred with black. Tail brown above, ashy white beneath, and both surfaces marked with eight narrow brown-black transverse bands. Length thirteen inches and a half.

Inhabits Madagascar.

SUB-FAM. MILVINA.

Bill moderate, curved from the base; cere naked; nostrils oblique, oval, or elliptical; tarsi short, slender; toes weak; wings very long; tail slightly or deeply forked or graduated, and composed of twelve feathers.

Genus MILVUS. Cuvier.

Bill moderately robust; nostrils elliptical, oblique; tarsi short, slender, and scutellated; fourth quill feather the longest. Tail deltoidal forked or graduated; claws robust.

Milvus parasiticus. Bill and cere yellow; eyes dark brown; head and neck pale tawny, each feather with a longitudinal blackish brown streak which includes the shaft; interscapulars, back, tail coverts, and shoulders, brown, the feathers tipped with a lighter tint; chin and throat streaked longitudinally with brown and dirty white; breast and belly dirty dull rufous, with a narrow stripe of black along the centre of each feather; under tail coverts and thighs rufous; primary and secondary wing coverts blackish brown, with light tips. Primary wing feathers black, mottled slightly with white on inner vanes towards quills; secondaries brown, with the inner vanes crossed by indistinct dusky bands. Tail slightly forked, reddish brown, with eight or nine narrow blackish transverse bands, and the tips of all the feathers reddish white; legs and toes yellow; claws black. Length twenty inches.

Young.—Bill black; colour above dark brown, the feathers tipped with tawny white or pale rufous; beneath brown, feathers tawny white towards tips, shafts black; under tail coverts sub-rufous.

Inhabits Africa,—common in South Africa.

Le Parasite, Le Vaill. *Ois. Afriq. pl.* 22. Kucken-duif of the Cape Colonists.

Genus ELANUS. Savigny.

Tarsi short, reticulated, and half covered with feathers below the knees; wings long; tail slightly forked or moderately graduated.

Elanus Cæsius, Savig. Bill black; cere yellow; eyes red; front and eyebrows white; crown and back of neck light

bluish grey; interscapulars, back, rump, and scapulars, bluish grey; shoulders jet black; chin, throat, breast, belly, vent, and inside of wings, pure white. Primary and secondary wing coverts bluish grey, with the edges of inner vanes white, and some of the feathers distinctly tipped with that colour; primary quill feathers hoary grey, shaded towards tips with reddish brown; secondaries bluish grey. Tail slightly forked, pale bluish white; shafts dark reddish brown; legs and toes yellow; claws black. Length eleven inches.

Young.—Bill black; base of under mandible, and the part of the upper one adjoining it, yellowish; front reddish white; crown and back of neck dusky, slightly variegated with very fine reddish tawny streaks; interscapulars dirty blackish blue, with fine reddish white tips; back uniform dusky blue; scapulars dirty blackish blue, with a tinge of brown, and all broadly tipped with dull white; shoulders black, many of the feathers faintly tipped with white. Primary and secondary wing coverts bluish grey, many of them with white tips; primary wing feathers blackish blue with white tips; secondaries with reddish white tips. Chin and throat white; breast and belly pale tawny or dull reddish white; thighs white. Tail a pale dusky blue with shades of brown; part of edges of inner vanes white; tips of feathers white or tawny; legs and toes yellow; claws black.

Inhabits South Africa.

Elanus Melanopterus, Leach. *Falco melanopterus*, Daud.
Orn. Le Blanc, Le Vaill. *Ois. d'Afrique*. &c. 36 & 37.

Genus NAUCLERUS. *Vigors*.

Bill weak, compressed; nostrils sub-oval, oblique; wings long, second and third quills longest; tail long and deeply forked; tarsi short, weak, and reticulated; feathered below the knees.

Nauclerus Riocourii, Vigors. Body above ashy grey; below pure white; a white stripe on the forehead; a line before and behind the eye black. Tail grey; bill black; cere and tarsi yellow; second quill feather the longest. Length fourteen inches and a half.

Inhabits Senegal.

Elanoides Riocourii, Vieill.

SUB-FAM. BUTEONINA.

Bill curved from the base, the edges entire; tarsi naked or covered with feathers; wings almost as long as the tail; figure rather robust.

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GENUS *PERNIS*. Cuvier.

Bill curved from the base, edges sharp, culmen nearly sharp; tarsi short, moderately strong, reticulated, and with scutæ on the toes; space between angle of mouth and eye covered with feathers like scales; nostrils, oblique narrow slits at the anterior edges of cere; tail and wings long; tarsi half covered with feathers below the knees.

Pernis Madagascariensis, Smith.* Above, dark brown of various tints, the feathers of the head more or less distinctly margined with rufous; beneath, dull brown dashed with white, particularly on the throat and the breast; most of the feathers on belly narrowly tipped with white; hinder part of belly, vent, under tail coverts, and legs, white; some brown spots on the outer sides of thighs. Quill feathers light brown, transversely banded with dark brown, and the inner vanes towards quills crossed with white; the tips of most of them dull white. Tail above dark brown; towards base banded with white, towards tip with brown grey, the tips themselves white; beneath, white crossed with about four dark brown bands. Bill dark horn-coloured; lower mandible yellow towards base; naked portion of tarsi and toes yellow; claws dark horn-coloured. Length eighteen inches.

Young.—Above, light brown; the feathers, particularly those of the shoulders, tipped with rufous white; beneath, fulvous dashed with white, and the feathers of breast and belly tipped with white.

Inhabits Madagascar.

Obs. Most of the feathers of head, neck, and body, pure white towards quills.

GENUS *BUTEO*. Bechst.

Bill curved from the base; edges a little waved, culmen rounded; angle of mouth under the eyes; spaces between nostrils and eyes covered with hair; nostrils irregularly rounded, naked and open; tarsi robust, scutellated before, reticulated behind; tail slightly rounded.

Buteo Jackal. Bill black with the exception of a little of the lower mandible at its base, which, and the cere, are dull yellow; eyes dark brown; head, neck, back, shoulders, chin, and throat, black or blackish brown; breast deep chestnut or ferruginous red; belly, under tail coverts, and thighs, black; all the feathers broadly tipped with white or ferruginous red. Primary wing feathers black, with a tint of hoary upon the

* This species has not the scale-like feathers of *Pernis*, but in other respects it exhibits most of the characters of the genus.

outer vanes, and the inner ones towards quills broadly edged with, if not altogether, white; secondaries bluish grey, with many transverse narrow black bands, the very tips of some of the feathers are white. Tail short, nearly even, and deep chestnut or ferruginous red, each feathered marked by a black blotch close to tip, and all, more or less mottled with white towards quills; legs and toes dull yellow; claws dark horn-coloured. Length from bill to base of tail twelve inches; length of latter eight inches.

Young.—Above dull brown, most of the feathers edged with tawny; beneath, pale fulvous; the throat and sides of neck with longitudinal black blotches; tail grey-brown banded with black.

Inhabits South Africa,—very common.

Falco Jackal, Shaw. *Zool.* vii. p. 173. Le Runoir, Le Vaill. *Ois. Afriq. pl.* 16. Jackal-vogel of the Cape Colonists.

Obs. The plumage of this species is subject to endless variety.

Buteo tachardus. Bill black, with the base of lower mandible, and a small portion of the upper adjoining it, yellow; cere yellow; eyes brown. Head, neck, back, and rump, brown, with the edges and tips of the feathers rufous, and the bases of many of them, particularly on the head and neck, white; many of those of neck, back, and shoulders, clouded, spotted, or crossed by irregular white streaks. Under parts white, the throat streaked with longitudinal brown lines; the breast and posterior part of belly more or less spotted with oblong or roundish brown blotches; centre of belly white; thighs reddish brown. Primary quill feathers black, the inner vanes towards quills white; secondaries brown, with irregular transverse blackish bands, the edges of the inner vanes white. Tail moderately long, slightly rounded, of a greyish or rufous colour, with ten or more narrow waved transverse blackish brown bands; tip of each feather dirty reddish white. Legs and toes greenish yellow; claws black. Length eighteen inches.

Young.—Above brown, verging towards blackish brown; below brown-red or dull rufous, the shafts of the feathers black; chin with a slight mottling of white. Tail feathers greyish, on outer vanes, crossed by many waved or oblique narrow blackish bands; on inner vanes reddish white, or reddish brown, with similar black bands; tips of all the feathers dirty reddish yellow. Legs and toes greenish yellow; claws black.

Inhabits South Africa.

Falco tachardus, Daud. Le Tachard, Le Vaill. *Ois. d' Afriq. pl.* 19.

Buteo desertorum. Bill and cere yellow; eyes red; head, neck, back, and belly, ferruginous red; the latter with dashes of black; throat, breast, and under tail coverts greyish white. Primary quill feathers black. Tail ferruginous red above; greyish white with indistinct transverse bands, beneath. Legs and toes yellow; claws black. Smaller than *Buteo Jackal*.

Inhabits South Africa,—rare.

Falco desertorum, Daud. Shaw, Lath. Le Rougri, Le Vaill. *Ois. d' Afrig. pl. 17.*

Genus BUTAETES. Lesson.

Bill slender, arched from the base; nostrils oblique; wings nearly as long as the tail, fourth feather the longest; tarsi feathered to the toes.

Butaetus buteo, Lesson. Over each eye a narrow black stripe; head, neck, breast, anterior part of belly, and legs, white, with longitudinal brown stripes, largest on the sides of breast and belly; interscapulars, scapulars, and shoulders, brown, margined with rufous or white; back nearly an uniform brown; upper tail coverts white, dashed with brown; centre of belly and flanks dark brown, variegated with rufous or tawny white; hinder portion of belly and under tail coverts an uniform dull white. Primary wing feathers brown, both vanes towards quills white; secondaries brown, inner vanes white towards quills; all the feathers obscurely tipped with dusky white. Tail white towards base, grey-brown towards extremity, with an indistinct dark band immediately behind the tip, which is dull white. Bill dark horn-colour; the base of lower mandible, cere, and toes, yellow; claws black.

Inhabits South Africa and Europe.

Falco lagopus, Gmel. Buse Gantée, Le Vaill. *Ois. d' Afrig. pl. 18.*

Butaetes Lessonii, Smith. Above brown, the shoulder feathers margined with brown-white; ears and space behind base of lower mandible brown-black; under parts white; the breast and anterior part of belly streaked with brown-black. Primary wing feathers black-brown, the inner vanes towards quills white, secondaries with blackish transverse bands on inner vanes, and all tipped with white; inside of shoulders white, spotted with black. Tail nearly even, the feathers black-brown, variegated with narrow waved irregular bars of a darker tint, and all tipped with obscure white. Bill bluish black; cere and toes yellow. Length eighteen inches.

Young.—Cere and toes greenish yellow; head and back of neck light brown, feathers margined with rufous; interscapu-

lars and back dark brown; throat, breast, and belly, tawny white, more or less variegated with longitudinal brown streaks.

Inhabits South Africa,—near Heer-logement.

Morphnus dubius, Smith. *South African Quarterly Journal*, vol. i. p. 117.

Genus CIRCUS. *Bechst.*

Bill moderately compressed; spaces between eyes and nostrils covered with rigid hair; nostrils oblong rounded; a colleret of rigid feathers in a half-circle between the chin and the ears, formed by the auricular feathers. Tarsi long, slender, scutellated before, reticulated behind; claws moderate. Tail rounded and broad.

Circus gallinarius, Shaw. *Male*.—Head, neck, back, wings, and rump, bluish-grey; wing feathers white at their bases, elsewhere black; insides of shoulders, rump, belly, flanks, thighs, and tail beneath, white; tail above ashy grey, tips of feathers white; eyes yellow. Length one foot seven inches.

Female.—Upper parts dull brown; the feathers of head, neck, and anterior part of back, bordered with rufous; beneath yellow-rufous, variegated with large longitudinal brown spots; outer vanes of wing feathers rayed dark brown and black, inner ones black and white; rump white; the two middle tail-feathers rayed black and deep ash, the lateral ones rufous-yellow and black.

Young.—Similar to the female, and the male of the first and second year.

Inhabits Egypt, Europe, and America.

L'Oiseau Saint-Martin, Buff. *Falco Gallinarius*, Lin. *Falco Pygargus*, Gmel.

Circus melanoleucus. Head, neck, back, rump, shoulders, and upper parts of breast, deep black; under parts pure white. Primary quill feathers black, secondaries and wing coverts cinerious, variegated with black spots or imperfect bands. Tail above, hoary grey, irregularly spotted with brown; beneath white. Bill black, with a yellowish spot on each mandible towards base; cere, tarsi, and toes, yellow; claws black. Length twenty-two inches.

Female.—Grey-white dashed with black.

Young.—Brown-black above; white beneath, dashed with longitudinal brown-black streaks.

Inhabits South Africa and India

Falco melanoleucus, Gmel. Lath. Faucon a collier des Indes, Sonnerat, *Itin*, t. ii. p. 182. Le Tchong, Le Vaill. *Afriq. pl.* 32.

(To be continued.)

[FROM THE SOUTH AFRICAN QUARTERLY JOURNAL,
JULY to SEPTEMBER, 1834.]

AFRICAN ZOOLOGY:

By DR. SMITH.

Continued from page 288.

Circus Acoli. *Male.*—Bill horn-coloured towards base, bluish black towards tip; cere red; eyes orange-red: colour of plumage above pale bluish grey; beneath whitish, with the breast, belly, and thighs, finely rayed transversely with black; body slender; legs long; tail nearly even, and of a dirty brownish white tint; shafts reddish brown; legs and toes yellowish; claws black.

Inhabits South Africa,—Zwartland, Le Vaillant.

L'Acoli, Le Vaill. *Afriq. pl.* 31.

Circus ranivorus. Bill black, with a shade of yellow on lower mandible near base; eyes and cere yellow; front and crown brown, varied with light rufous; back of neck and interscapulars dirty dark brown, the feathers edged with a pure or reddish white; back and rump brown, feathers with tawny tips; upper tail coverts ferruginous and brown, with whitish tips; shoulders mottled dark blackish brown, ferruginous and pure white; cervical collar blackish brown and white; chin, throat, and breast, dirty brown, the feathers edged and tipped with dirty reddish white. Primary and secondary wing coverts blackish brown, with grey transverse bands; primary quill feathers with the outer vanes marked by alternate transverse bands of deep hoary grey and brownish black; inner ones with a considerable proportion of bluish grey, variegated by transverse partial blackish bands, the inner edges of vanes towards quills, clear white; towards tips the feathers all nearly uniform brownish black; secondaries brown and deep bluish grey, in alternate transverse bands; inner edges of inner vanes white. Tail with five blackish brown, transverse bands, and six bluish grey ones, besides bluish grey tips. Legs and toes yellow; claws black. Length eighteen inches.

Inhabits South Africa.

Falco ranivorus, Daud. Shaw. *Zool.* Le Grenouillard, Le Vaill. *Afriq. pl.* 23.

Circus maurus, Temm. Bill black; the base of lower mandible and the portion of the edge of upper adjoining it, yellow; cere and eyes yellow; head, neck, back, rump, shoulders, and all the under parts, brownish black, verging on pure black; the bases of the feathers of the nape pure white. Outer vanes of primary quill feathers hoary grey; inner vanes towards quills white; elsewhere brown or black; secondaries with the outer

vanes hoary, the inner ones nearly white, and both, towards tips, crossed by a broad blackish band; upper tail coverts white, under ones black, some of them narrowly tipped with white. Tail above black, with four transverse bands of dark bluish grey, and the tips of all the feathers greyish white; the vanes close to quills pure silky white. Legs and toes yellow; claws black. Length from bill to base of tail ten inches; length of latter nine inches and a half.

Young.—Front blackish brown; crown and part of nape light rufous, variegated with brownish black streaks or clouds; back of neck an uniform brownish black, feathers broadly tipped with pale rufous or tawny white; chin, throat, breast, and belly, tawny rufous; the two first with brownish streaks or spots, the third clouded by brownish blotches, and the last slightly marked by longitudinal brown streaks. Quill feathers with the grey less clear, and the tips of the feathers tawny white. Tail blackish brown, with three distinct white transverse bands, and the bases and tips of all the feathers white. Legs and toes dirty yellow.

Inhabits South Africa.

Circus Swainsonii, Smith. Front and eyebrows white; upper parts ashy grey; the tail coverts faintly banded with brown; under parts and insides of shoulders pure white. Primary and secondary wing coverts grey, faintly tipped with white; quill feathers towards points brown black, outer vanes towards quills grey, inner vanes white. Tail rounded, the centre feathers brown-grey with four or five broad, dark brown bands; lateral feathers pale fulvous or tawny white, banded irregularly with dark brown; the tips of all the feathers white. Bill black with a faint yellow mark on the edges of both upper and lower mandible towards base; cere, legs, and toes yellow; claws black. Length seventeen inches and a half.

Young.—Front and eyebrows whitish; top of head and back of neck pale rufous, variegated with longitudinal dark brown stripes; back and shoulders dull brown, the feathers margined with rufous; upper tail coverts white; chin whitish; under parts pale fulvous, darkest on the throat and breast; many of the feathers with a dark rufous brown stripe in the course of the shaft. Outer tail feathers banded pale fulvous and dark brown.

Inhabits South Africa.

Circus superciliaris, Smith. *South African Quarterly Journal*, vol. i. p. 385. (*the young*.)

Circus Le Vaillantii, Smith. Bill black; base of lower mandible yellow. Front, chin, nape, cervix, and part of breast, white or rufous white; the feathers of the neck and nape each

with a spot of brown at tip; interscapulars and back dirty brown; upper tail coverts brown, with their tips pale tawny; throat, sides of neck, and anterior part of breast, blackish brown; flanks, belly, thighs, and vent, reddish brown, inclined to dirty ferruginous; shoulders variegated brown and pale tawny; inside of wings dark tawny, spotted with brown. Primary and secondary wing coverts brown, with tawny tips; primary quill feathers dark brown, the inner vanes towards quills light tawny, variegated by longitudinal wavy dusky lines; secondaries similarly coloured. Tail nearly even, dark brown, with the three outermost feathers of each side distinctly marked by transverse interrupted tawny bands; centre ones with indistinct light coloured bands on inner vanes; tips of all the feathers tawny. Legs and toes greenish yellow; claws black. Length about eighteen inches.

Young.—Plumage an uniform dark brown, very slightly variegated by some streaks of bright tawny about the chin, front, and anterior edges of shoulders. The brown of the upper parts is dark and clear; that of the lower reddish brown or ferruginous. Tail feathers nearly uniform brown, with tawny tips, and some similarly coloured spots towards quills. Bill blackish blue, the lower mandible yellow at base. Legs and toes dirty yellow.

Inhabits South Africa.

SUB-FAM. FALCONINA.

Bill curved from the base, with one or more strong teeth upon the edge of the upper mandible; wings as long or longer than the tail, first feather long, second longest.

Genus FALCO. *Bechst.*

Bill strong, conical, curved from the base with a strong tooth on edge of upper mandible, the lower notched near point; nostrils round, situated near anterior edge of cere; tarsi short, more or less robust, their upper third feathered, the rest reticulated. Tail moderately long, slightly graduated, broad, and rounded; hinder toe strong; claws falciform; cere nearly naked.

Falco peregrinus, Lin. Head and upper part of neck bluish black, rest of upper parts ashy blue, the feathers crossed by irregular blackish bands; quill feathers blackish, with a hoary tint on the outer vanes, inner vanes with transverse tawny or white stripes; edges of shoulders white; tail ashy with numerous transverse black bands, broadest towards the tips which are dull white. Beneath each eye a broad black streak;

throat and breast white, the latter with a few longitudinal black striæ; belly dull greyish white with many small irregular-shaped black spots. Eyes brown; bill bluish; base of lower mandible, space round eyes, and the legs, yellow. Length thirteen inches.

Young.—Head bluish brown; feathers finely edged and tipped with rufous; nape and back of neck variegated blackish brown and tawny white; back blackish feathers with rufous tips; chin and throat pure white; breast and belly tawny, variegated with oblong blackish spots, largest on the flanks; tail brownish black with seven or eight transverse rufous bands, tips white; legs and toes greenish yellow; claws black.

Inhabits Africa and Europe,—not uncommon in South Africa.

Le Faucon, Buff. *pl. enl. pl.* 421. The Blue-back Falcon, Penn. *Brit. Zool.* Falco Peregrinoides, Smith, *South African Quarterly Journal*, vol. i. p. 235. Spervel of the Cape Colonists.

Falco biarmicus, Temm. Front and anterior part of crown black, rest of crown and nape rufous; back of neck, interscapulars, back, upper tail coverts, and shoulders, bluish grey, with dark slate coloured transverse bands; from the eye to the nape a black stripe, and another behind the angle of the mouth; sides of neck, and all the under parts, pale tawny-white. Bill bluish, the base of the lower mandible yellow; eyes dark brown. Primary and secondary wing coverts hoary blue, with dusky grey-white transverse bands; primary and secondary wing feathers brownish; the inner vanes, for the greater part of their length, partially crossed by somewhat conical white spots. Tail hoary white, with ten or eleven moderately broad, black bands; the intermediate spaces thinly sprinkled with minute brownish black dots or lines; tips of all the feathers white; cere, legs and toes, yellow; claws black. Length of male fifteen inches, of female seventeen inches.

Young.—Head rufous, the front and nape variegated with black; back of neck and interscapulars blackish, with the feathers finely tipped with rufous; the black stripes on sides of head less strongly marked than in full-grown specimens. Sides of the neck rufous; chin and throat tawny-white; breast and anterior part of belly pale rufous, with a roundish black blotch towards the middle of each feather; hinder part of belly, under tail coverts, and thighs, pale rufous, without variegations. Primary and secondary wing feathers blackish, with the inner vanes marked by transverse oviform pale tawny spots, all tipped with light rufous. Tail blackish, with seven or eight irregular transverse rufous bands: all the feathers broadly tipped with rufous. Bill bluish green, with shades of black, and the lower mandible with a very faint tinge of greenish yellow at base; cere

dusky greenish yellow; eyes dark brown; legs and toes yellowish white; claws a dark horn-colour.

Inhabits South Africa.

Falco chiqueroides, Smith. *S. A. Quarterly Journal*, vol. i. p. 233.

Falco concolor, Temm. *Male*,—Bill black; cere and legs yellow; plumage ashy grey; tail finely banded with a paler tint, and each feather slightly rayed longitudinally with a deeper colour than that of the body.

Female,—a dusky lead colour.

Inhabits Senegal, Barbary, Egypt, and Arabia.

Falco rupicolus, Daudin. Bill bluish black towards tip, bluish white at base; cere yellow; eyes brown; head, together with the back and sides of neck, dull blue-grey, each feather marked along the centre by a fine longitudinal black streak; interscapulars, back, shoulders, and scapulars, deep rufous, with irregular or somewhat triangular black spots; chin tawny; breast rufous, variegated with longitudinal black lines; belly rufous, with black spots; vent and thighs tawny, without variegations. Primary and secondary wing coverts black, with irregular tawny-white transverse bands; primary wing feathers black, the inner vanes nearly completely crossed by numerous white indentations; secondaries blackish, both vanes crossed by irregular rufous bands. Tail dark bluish grey, with seven or eight black bands, the last nearly an inch in width; on the three outermost feathers of each side the black only appears upon the inner vanes; all the feathers broadly tipped with white. Legs and toes yellow; claws black. Length of male twelve inches, of female fourteen inches.

Young.—Head and neck rufous tawny, with indistinct longitudinal black streaks; back and shoulders light rufous, with large irregular or triangular black spots; chin nearly white; throat light tawny rufous, with irregular streaks like those on the head; belly of the same ground colour as breast, and streaked or spotted before, behind like the vent and thighs, without variegations. Wing feathers all distinctly tipped with white. Tarsi, toes, and cere, dull yellow.

Falco rupicoloides, Smith. Head, neck, back, shoulders, and scapulars, pale tawny, clouded with pale rufous; the head and neck variegated with longitudinal black stripes; the back, shoulders, and scapulars, with broad brown transverse bars; rump brown with blue-white bars. Throat and under parts a pale fawn-colour, the breast and belly with a few brown stripes; flanks rayed with brown. Quill feathers brown, inner vanes banded with pale rufous. Tail brown, with about six bluish

white transverse bands, tips of the feathers pure white. Bill bluish black, base of lower mandible yellow; cere, tarsi, and toes, yellow; claws black; eyes sandy-grey. Length sixteen inches.

Inhabits South Africa.

Falco punctatus, Cuvier. Above deep rufous; head and neck variegated with longitudinal black stripes; back and shoulders with broad transverse black blotches: below white, breast with longitudinal brown blotches, belly and vent with roundish, brown-black, spots. Primary quill feathers black, inner vanes partially crossed by white or rufous bars; secondaries rufous, barred with black. Tail dark rufous with about six transverse black bands, the tips of feathers rufous white. Bill blackish blue, base of lower mandible yellow. Legs and toes greenish yellow. Length of male eleven inches, of female twelve inches.

Inhabits Isle of France and Madagascar.

Obs. In the specimens from Madagascar the black spots on the back are generally smaller, the under parts are principally rufous, and the tail blue-grey with black transverse bars.

Falco subbuteo, Lath. Head and upper part of neck dark blue-grey, rest of upper parts light blue-grey; the shafts of all the feathers black; over each eye a narrow rufous-white stripe, and below each, a black crescent, the one extremity extending under the eye, the other on a line with the base of lower mandible; sides of neck, throat, breast, and belly, tawny-white; the two last freely variegated with longitudinal black blotches; vent, under tail coverts, and thighs, rufous. Outer vanes of wing feathers hoary-blue, inner dull brown, crossed with white bars towards quills, all very finely margined and tipped with dull white. Tail slightly rounded, the two centre feathers blue-grey, the rest blue-grey banded on the inner vanes with pale rufous and tipped with tawny-white. Bill bluish, base of lower mandible yellow; cere, legs, and toes, yellow; claws black. Length thirteen inches.

Inhabits South Africa and Europe.

Le Hobereau, Buff. Hobby Falcon, Lath. *Falco Cuvierii*, Smith, *South African Quarterly Journal*, vol. i. p. 392.

Falco Lythofalco, Lin. Upper parts of body and tail ashy-blue, the centres of feathers with a longitudinal brown stripe; five irregular black transverse bands formed by isolated spots upon the tail, the one towards the point very broad; tips of the feathers inclined to white. Throat white, rest of under parts yellow-rufous with longitudinal brown spots; bill blue; cere, space round eyes, and feet, yellow. Quill feathers rayed on inner vanes with white; sometimes a rufous or yellow rufous

collar towards lower part of neck above. Length of male eleven inches.

Young.—Upper parts dark brown, feathers bordered with rufous; tail blackish, with five narrow brown-red bands; the bands of primary quill feathers rufous white.

Inhabits Egypt, Porto Rico, and Europe.

Falco æsalon. Linn. Le Rochier, Buff. *Ois.*

FAM. STRIGIDÆ. *Vigors*.—OWLS.

Bill straight at base, curved towards the point; cere membranous covered with stiff hair or setaceous feathers; sides of upper mandible a little dilated towards edges, the lower mandible shorter than the upper, truncated and notched at point; nostrils rounded, oblique, entirely open or covered by the setaceous feathers of the cere; tarsi mostly feathered, when not feathered, reticulated; the anterior toes nearly equal, the external versatile, moderately robust; claws strong and retractile. Tail generally moderate, even, rarely elongated and graduated.

Genus SURNIA. *Dumeril*.

Head rounded without enlarged conch or egrets; tarsi and toes feathered to the claws; tail long, graduated.

Surnia choucou. Base of bill surrounded by fine feathers resembling hairs; upper part of head, back of neck, interscapulars, and wing coverts, reddish grey-brown; the latter variegated with white spots; wing feathers tipped with white. Tail composed of twelve feathers, the two centre ones grey-brown like the wings, the rest grey-brown, the outer vanes banded with pure white, the inner vanes pure white without bands. Throat and under parts pure white; the feathers of the legs very long; insides of shoulders white. Bill small, and like the claws black; eyes bright orange. Length eight inches and a half; figure slender. Wings when folded reach to the middle of the tail.

Inhabits South Africa,—towards the Knysna.

Strix choucou, Lath. Le Choucou, Le Vaill. *Ois. d'Afrique*. pl. 38.

Surnia nisusella. Plumage above brown, of different tints, passing insensibly from the deepest to the lightest shades, or even in some to white; throat with a sort of collaret or white blotch. Breast, and under parts of body, of the same colour as the back, but disposed in somewhat regular transverse bars, lightest towards the legs; the latter covered with fine silky grey-white feathers. Tail beneath banded brown-black and

reddish white, above the white is more pure and the brown lighter. Bill and claws brown black; eyes deep topaz yellow; wings when folded extend over two-thirds of the tail. Length about twelve inches.

Inhabits South Africa,—Great Namaqualand.

Strix nisuelia, Lath. Le Chou-cou-hou, Le Vaill. *Afriq. pl.* 39.

Obs. In the figure given by Le Vaillant, the facial disc is margined by two rows of brown spots.

Genus NOCTUA. *Savigny.*

Head without egress, ear opening oval, moderate. Facial disc little developed, almost incomplete; toes feathered or covered with rigid hairs; tail short, equal.

Noctua hirsuta. Forehead and lores whitish with a few black hairs at the base of the beak; top of head and nape ashy brown; back wing coverts and quills an uniform brown; scapulars and inner secondaries spotted on inner webs with white; throat reddish; breast and belly whitish, varied with large reddish brown spots; tail feathers banded with four bars of brown and four of ash-colour, their tips white; toes marbled with red and brown, their edges with rough excrescences of a yellowish colour, and a regular series of strong bristles; bill black; the tail white.

Inhabits Madagascar, India, and Ceylon.

Strix hirsuta, Temm. *pl. col.* 289.

Noctua occipitalis. Forehead and upper part of head reddish, dotted with white; upper part of body brown and yellow, with white spots encircled with black; male with a whitish band on the occiput; female, a reddish one; on each side of this a band composed of a tuft of feathers spotted with black and white; all the lower parts of body dashed with clear red; quills regularly banded, alternately, brown and reddish. Tail feathers brown or yellow, with five white spots on both webs, those on the outer ones smallest; legs and toes covered with a very short down; beak yellowish, with some white hairs on its sides as well as near the eyes. Length seven inches.

Inhabits Africa.

Strix occipitalis, Temm. *pl. col.* 34.

Noctua Woodfordii, Smith. Above brown, freely sprinkled with somewhat triangular, clear white spots, and the back, scapulars, and shoulders, marked besides with narrow transverse, obscure white, or dull tawny zig-zag lines; the outer-

most scapulars principally white, forming an irregular oblique band of that colour on each side; shoulders also with some large white spots. Primary quill feathers dull brown, the outer vanes barred with white, the inner ones with tawny; secondaries light brown. Facial disc white sprinkled with brown, but immediately around the eye pure black; eyebrows white, feathers crossed by narrow black bars; guttural collar white, crossed with black lines; sides of neck and breast tawny brown marked with brown and white transverse bars; belly irregularly banded black and white, and more or less clouded with pale rufous; legs rufous white with waved transverse brown lines. Tail brown with narrow bands of tawny white, which are generally edged by a darker brown; tips of feathers dull white. Bill and eyes yellow, the feathers about base of bill setaceous, white towards bases, black toward extremities; toes above covered with setaceous feathers, on the sides bare, reticulated and yellow; claws a dark horn-colour. Length about twelve inches.

Inhabits South Africa,—*rare*.

Large-eyed Owl, Latham.? *History of Birds*, vol. i. p. 360

Noctua Capensis, Smith. The upper parts of the head, and the back and sides of the neck, brown, each feather towards tip crossed by a narrow white bar; interscapulars, back, rump and shoulders, black-brown, the feathers with two or more waved, narrow, rufous, transverse stripes, several of the outermost scapulars principally white, giving rise to a stripe of that colour on each side of the back; on shoulders also some large white blotches; edges of shoulders white. Quill feathers brown, crossed with narrow rufous or white bands. Throat brown mixed with white; breast brown, barred irregularly with white and tawny; belly pure white variegated with ferruginous-brown blotches; thighs tawny, mottled with black-brown. Tail dark black-brown, crossed by twelve very narrow rufous bars, and tipped with rufous. Bill greenish yellow; claws yellow at bases, blackish towards points. Length nine inches.

Inhabits South Africa,—*rare*.

Noctua perlata, Vieill. Upper parts of head and neck rufous-brown or simple brown, spotted freely with white; in front of interscapulars a more or less distinct light rufous collar; the rest of upper parts brown, sparingly spotted with white, each spot encircled by black-brown; several of the outermost scapulars half-white, forming a continuous line of that colour on each side of back; shoulders with a few white blotches intermingled with the white spots. Wings brown, imperfectly barred with white or pale rufous. Under parts either rufous variegated

with white, or an irregular mixture of brown rufous and white, the vent and under tail coverts, in some, nearly pure white. Tail dark brown, crossed by five or six rows of white spots, the last row at the tips of the feathers. Bill yellowish; claws a dark horn-colour. Length seven inches.

Inhabits Southern Africa and Senegal.

Le Perlée Levaill, *pl.* 284. *Strix perlata*, Vieillet.

Genus SCOPS. *Savigny.*

Head with lateral egrets; facial disc incomplete or indistinctly formed; tarsi feathered to the toes; tail short.

Scops Europeanus. Above brown, finely variegated with white, grey-white, and tawny white bars or spots; and with black longitudinal stripes; sides of head from bill to egret white, the feathers crossed with delicate black lines; egrets brown, finely marked with black and white variegations; rostral feathers long and rigid, white towards bases, the points black; cervical collar brown-black and white, most distinct on sides of neck; outermost scapulars with large tawny-white spots. Wing feathers blackish brown, outer vanes barred with white, inner vanes towards margins marked with a series of rufous spots. Under parts grey-white clouded with tawny, variegated with fine black undulated bars and longitudinal black blotches and stripes. Tail tawny-white, finely and closely barred with brown or black, some of the bars of the latter colour being longer than others give the appearance of narrow irregular black bands; tips of feathers tawny. Legs pale tawny more or less pointed with brown. Eyes, toes and base of bill yellow; tip of bill and claws black. Length seven inches.

Inhabits South Africa, Senegal, and Europe.

Strix Scops, Linn. *Le Scops* or *Petit-Duc*, Buff. *Scops-eared Owl*, Lath. *Orn.*

Obs. Most Ornithologists regard the Owl above described as identical with the little-eared Owl of Europe, yet I am much disposed to consider it as distinct. Its colours are much darker and differently disposed, and in themselves, even different on the inner vanes of wing feathers: I am the more inclined to this opinion, as I have now before me a specimen from Senegal, which exactly corresponds with the European *Scops*. The colours of the South African bird being constantly different, it may perhaps be designated as the *Scops Capensis*, and that of Senegal as the *Scops Europeanus*.

Genus OTUS. *Cuvier.*

Ear opening very large, extending from the bill to nearly the top of the head, with a membranous operculum in front; head with egrets erectile at the pleasure of the bird; bill long, compressed, and curved from the base; tarsi feathered to the toes.

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Otus ascalaphus. Egrets or horns rudimentary and slender; setaceous feathers of the cheeks directed upwards and very short above the eyes, and assist in giving a flattened appearance to the forehead and top of the head; beak black; body, wings, and tail, whitish red varied with different shades; the whole body spotted and striped with brown-black, the spots lanceolate on the head and nape, confluent on the ears; the quills and tail feathers with broad bands and narrow zigzag brown stripes; breast dashed with the same; the rest of the under part with fine transverse stripes. Under surface of tail white, with five or six narrow dusky transverse bands; throat and middle of breast white; tarsi long, and as well as the toes covered with whitish feathers. Length about eighteen inches.

Inhabits Egypt.

Strix Ascalaphus, Savig. *Egypt*. Temm. *pl. col.* 57.

Otus leucotis. Egrets placed above the eyes, long and pointed, which, with the feathers of the head and nape, are dull white varied with reddish zigzag lines, and a longitudinal black stripe in the direction of the shafts, the tip of each feather is black; face and cheeks white with a rufous tinge under the eyes and a broad black band behind, extending to the egrets; edges of wings and large coverts white, upper and under parts of body light rufous, variegated with black and vermiculated with brown; quills and tail feathers ashy, delicately marked with brownish zigzag lines and broad transverse stripes; vent white, with brown stripes. Bill a whitish horn-colour, and nearly covered by pure white bristles. Length six inches.

Inhabits Senegal.

Strix leucotis, Temm. *pl. col.* 16.

Otus maculosus. Above brown or black-brown; the upper parts of head, neck, and interscapulars, irregularly spotted with white or tawny-white; the back, scapulars, and shoulders, mottled with white or tawny-white undulated bars or blotches. Face grey, the feathers crossed by black bars; egrets brown, spotted with white; chin white; cervical collar dark brown, mottled with white in front of neck; in front of breast a large white crescent. Breast and flanks white, barred with brown and blotched with black; belly and legs tawny or pure white, more regularly barred with narrow brown lines. Tail slightly rounded, two centre feathers brown with four or five irregular tawny-white bars; lateral feathers brown with the transverse tawny bars more distinct. Eyes fine yellow; bill and claws black. Length eighteen inches.

Inhabits South Africa,—common.

Strix maculosus, Vieill. *Gal. pl.* 23. *Strix Africanus*, Tem. *pl.* 56.

Otus Capensis, Smith. Above brown, finely freckled or marked with pale tawny, undulated lines and the shoulders variegated with some large tawny blotches; face tawny-white, mixed with black near the eyes; egrets small, brown variegated with tawny; cervical collar dark brown, spotted with fulvous in front of neck. Anterior part of breast nearly an uniform brown, rest of breast and belly finely mottled brown and white, the colours principally disposed in zig-zag transverse lines and bars, and in some specimens the shafts are deep brown; vent and tail coverts tawny-white. Primary wing feathers pale fulvous, irregularly barred with brown, and the points entirely brown; secondaries brown with partial fulvous bands, the tips tawny white, more or less mottled with brown. Tail slightly rounded, the two centre feathers brown, with four tawny bars, the distal one broken and indistinct, the outer feathers tawny white with three brown bars, the extremities of all the feathers nearly pure white. Legs tawny white; bill and claws black. Length fourteen inches.

Inhabits South Africa,—in marshy situations.

Marsh Owl of the Cape Colonists.

Otus Madagascariensis, Smith. Above blackish brown, each feather with a tawny blotch on each vane, producing a mottled appearance; scapulars blotched, banded or undulated with tawny. Wing feathers dull brown, with tawny bars, many of them brownish towards their centres. Egrets black-brown, some of the feathers blotched on both vanes with tawny, others only on outer vanes; cheeks tawny-brown; shafts and points of feathers black; rostral feathers black and white. Throat crossed by an obscure white crescent, and below that an indistinct collaret which extends on each side of the neck nearly to the egrets, and is mottled black-brown and tawny-white. Under parts tawny with longitudinal brown blotches, largest on the breast. Legs tawny rufous with a few brown variegations. Tail dark brown, with four or five light brown bands margined with tawny. Bill bluish black; claws black. Length fifteen inches.

Inhabits Madagascar.

Obs. This species stands close to *Otus brachyotos*, but differs from it particularly in the want of white spots on the upper parts, and in the distribution of the colours of the collaret and hinder parts of the belly.

Genus STRIX. *Savigny.*

Bill straight at base. curved towards tip; ear opening ample with a large operculum; the circle of setaceous feathers of face much developed; no egrets; tarsi feathered; toes covered with hairs.

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Strix Capensis, Smith. Upper parts brown, clouded with black-brown, and thinly spotted with white dots; under parts yellowish white freely mottled with small brown spots. Facial disc clear white with a large black blotch at the inner angle of each eye; cervical collar dull white, the feathers tipped with tawny-brown, and streaked along their centres with dark brown. Wings about two inches longer than the tail; primary wing feathers brown, irregularly mottled with fulvous towards quills; secondaries tawny without, white within, and imperfectly barred with brown, the tips chiefly brown, edges of shoulders tawny-white, insides white, mottled with black spots. Tail short, two centre feathers brown with some white spots at tips, outermost feathers white imperfectly banded with brown, intermediate ones tawny-brown on outer vanes, white on inner, and both partially barred with brown. Tarsi a uniform yellowish white; bill yellowish white; eyes brown-black; toes yellow with a thin sprinkling of rigid yellowish hairs; claws horn-yellow. Length seventeen inches.

Inhabits South Africa.

Genus BUBO. Cuvier.

Ear opening small; facial disc indistinct; head with two egrets; tarsi feathered to the toes.

Bubo lactea. Bill large, blackish blue towards tarsi, yellowish towards point, and furnished on each side with long, narrow, bristly, black feathers; cheeks white, broadly margined behind with deep black; egrets black towards points, waved black and white towards bases; crown waved black and white; rest of upper parts dull brown, finely and irregularly waved with dull white lines; chin white, undulated with brown; throat pure white; breast and belly dull white, waved with delicate irregularly disposed zigzag lines. Primary wing feathers white towards quills, brown towards tips, and banded with blackish transverse bands; secondaries banded alternately brown and dull white, the latter with fine brown undulations. Tail rounded, banded alternately brown and white, the white bands about four in number, are mottled with brown; on the outer vanes of all the feathers; legs dull white with waved transverse brown lines; claws black. Length of male about twenty inches, of female about two feet.

Inhabits South Africa and Senegal.

Strix lactea Temm. *pl. col.* 4.

Bubo Capensis, Smith. *Young*.—Upper parts of head blackish brown, the feathers blotched and tipped with tawny; egret blackish, variegated on inner edges with clear tawny; back and

sides of neck dark brown, mottled with fulvous, the latter in large spots upon both vanes; back and shoulders blackish brown dashed with fulvous or tawny-white. Wing feathers black-brown with tawny bands, the latter often brown in the middle, particularly on the secondaries. Facial disc principally pale tawny-brown, at inner angles of eyes white; the rostral feathers tipped with black; cervical collar blackish, mottled with white at the throat, towards extremities brown; chin, and a large crescent in front of breast, white; breast and belly blackish brown, variegated freely with large transverse tawny blotches, which, towards the thighs, exhibit a whitish tint; legs rufous-white with small brown blotches; toes rufous-white, without variegations. Tail slightly rounded, the outermost feathers of each side banded black-brown and tawny-white, the bands of the latter colour brown in the middle, the centre feathers blackish brown with tawny bands, dusky in the middle; tips of all the feathers tawny-white, finely mottled with brown. Bill black; eyes yellow; claws light horn-coloured, darkest towards points. Length twenty-two inches.

Inhabits South Africa.

Obs. This bird I am convinced is distinct from the *Bubo Europeanus*. Adult specimens are said to be marked nearly as the young ones.

ORDER INSESSORES. *Vigors.*

Bill various; legs short or moderate; tarsi usually clothed with feathers; toes flat beneath; claws slender, moveable, somewhat retractile. curved and acute.

TRIBE FISSIROSTRES.

Bill broad at the base, gape very wide; legs short.

FAM. MEROPIDÆ.

Genus MEROPS.

Bill longer than the head, curved, rounded, slightly compressed on the sides, and pointed; nostrils lateral, rounded or in the form of a longitudinal fissure. Wings long and pointed, first or third quill the longest. Tail long, even, graduated or forked, often the two middle feathers longer than the others and terminating in narrow points. Tarsi short, slender, and scutellated.

* *With the middle tail feathers elongated.*

Merops Apiaster, Lin. Throat yellow, margined behind with black; front greenish white; occiput, back of neck, and interscapulars, maronne; back, rufous-yellow; middle of wings dark rufous; quill feathers and tail, olive-green; ocular band black; breast and belly, bluish green. Bill black; eyes red; feet brown. The two middle tail feathers an inch longer than the others. Length from bill to point of tail eleven inches.

Young.—Above brown-green; eyebrows rufous; no black collar; tail feathers all of equal length.

Inhabits Africa and Europe,—during the summer in South Africa.

Merops Malimbicus, Shaw. Head and neck slate-grey; chin white, passing in the form of a streak on each side of the throat; upper parts of body, wings, and tail, vinaceous ash-colour; quill feathers blackish brown; eye band blackish brown. Lower part of throat, breast, belly, and thighs, a fine deep or sanguine rose-colour, palest towards the vent. The two middle tail feathers about an inch and a half longer than the others, and terminate in narrow points. Bill and legs black; eyes red. Length about ten inches.

Inhabits Malimba.

Merops bicolor, Daud.

Merops Nubicus, Lin. Head and throat sea-green, the latter margined below with black; eye band black; neck, back, breast, and belly, bright red; wings and tail a dull red; quill feathers black at the tips, clouded with green; scapulars green-brown; tail feathers pointed with obscure green, the two centre ones much longer than the others, narrow towards the points, and of a blue-black colour; rump, vent, and under tail coverts, light blue. Bill black. Length from bill to point of middle tail feathers eleven inches and a half.

Inhabits Africa,—rare in South Africa.

Merops cæruleocephalus, Shaw.

Merops Ægyptius, Savig. Front yellowish white; forehead and eyebrows light green; top of head, neck, back, shoulders, breast, belly, and vent, dark green; eye band black, edged below by light green; anterior part of throat yellow, hinder part maronne; outer vanes of wing feathers olive-green, inner vanes dark dusky green, all tipped with black; tail feathers olive-green, the two centre ones about two inches longer than the others, narrow towards points, and green-black. Bill black; legs and toes brown. Length ten inches and a half.

Inhabits South Africa.

Var. Front, eyebrows, and line from base of lower mandible, white or green-white ; upper parts, particularly head and neck, dull brown-green ; breast light olive-green ; belly light green, palest towards vent.

Inhabits Madagascar.

Merops Savignii, Le Vaill. *pl.* 6. *Merops superciliosus*, Lin. ?

Obs. A variety of this species occurs in India and Java, with the rump, vent, tail, eyebrows, and stripe under eyeband, light blue, the upper parts olive-green ; the belly light green.

Merops Cuvierii, Le Vaill. Front, eyebrows, and throat, white ; top of head, eye-band, and middle of throat, black ; neck, above rufous-green ; interscapulars and shoulders green ; scapulars blue-green ; outer vanes of quill feathers olive-brown, inner vanes rufous green, all tipped with black. Back, rump, tail, and a transverse bar below, black ; of throat, blue-green ; breast and belly greenish white ; vent light blue ; two centre tail feathers longest, and narrow towards points, where they are of a black colour. Bill black. Length to tip of tail eleven inches.

Inhabits Senegal.

Merops Savignii, Swain. *Zool. Ill. pl.* 76. Le Vaill. *pl.* 9.

** *With the tail even.*

Merops Bullockii. The upper parts of the head, back, shoulders, rump, and tail coverts, green ; back and sides of neck rufous-green ; wing feathers green ; the primaries faintly and the secondaries distinctly tipped with black. Eye-band black ; throat red ; breast and belly rufous-green ; vent and under tail coverts dark blue. Tail even, two centre feathers green. Bill and legs black. Length seven inches.

Inhabits Senegal.

Merops Bullockoides, Smith. Front greenish white ; eyebrows green ; top of head and back of neck, pale chestnut, clouded with green ; back, shoulders, wings, and tail, dark green ; the secondary quill feathers broadly tipped with black ; eye band black, edged below with white ; throat red ; breast and belly rusty olive-green ; rump, vent, and under tail coverts, deep blue. Bill and legs black ; tail even. Length eight inches.

Inhabits South Africa.

Obs. This may be only a variety of the former, or the opposite sex.

(*To be continued.*)

REPORT

OF

THE EXPEDITION FOR EXPLORING

CENTRAL AFRICA,

FROM THE

CAPE OF GOOD HOPE,

June 23, 1834,

UNDER THE SUPERINTENDENCE OF

Dr. A. SMITH.

PUBLISHED FOR THE SUBSCRIBERS ONLY.

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1836.

[FROM THE REPORT OF THE EXPEDITION FOR EXPLORING
CENTRAL AFRICA, 1836.]

BIRDS.

Genus FALCO. *Bechst.*

Falco simitorquata. Above ashy blue; rump, and a narrow half collar in front of interscapulars, white; beneath silky white, quills and tail brown, with transverse bands of white spots; tip of tail feathers white. Length $7\frac{1}{4}$ inches. *Female.*—Back a rich clear reddish brown. Inhabits the country near old Latakoo.

Genus MELACONOTUS. *Sw.*

Melaconotus similis. Neck and head bluish grey; back a bright yellowish green; beneath yellow, the breast tinted with orange; greater wing coverts tipped with yellow; quills brown, outer vanes yellowish green; tail olive green, tips and edges of inner vanes of feathers yellow. Length 7 inches. Inhabits the country beyond Kurrichaine.

Melaconotus australis. Top of head brown; eyebrows white; edged above and below with black; neck and back grey brown; chin whitish; throat, breast, and belly, pale rusty buff; wing coverts bright chesnut, outer vanes of most of the quills the same; inner vanes blackish, edged towards bases with buff; tail black, all the feathers tipped with white, and the outer vane of the outermost one of each side the same colour till near quill. Length $7\frac{1}{2}$ inches. Inhabits the country north of Kurrichaine.

This, and the last described species, will certainly not belong to the same group, and are now only classed together till an opportunity occurs of comparing them with the various forms of the *Thamnophilinae*, &c. a step I have adopted with some satisfaction, from finding representatives of both united, by Swainson, in the Genus.* The first species has its representative (though on a larger scale) in the *Melaconotus Blanchotii*, and the last, in *Lanius erythropterus*. The general character of the plumage, and the habits of these four birds, are however very different. The two first are nearly alike, both seek their food upon trees in exposed situations, and do not readily leave one for another, nor endeavour to conceal themselves. The two last, on the other hand, generally resort to dense thickets, and keep almost constantly advancing nearly in straight lines, unless obstructed.

* Griffith's Translation of the Animal Kingdom, vol. 8, page 678.

Genus PRIONOPS. *Vieill.*

Prionops Talacoma. Front white, tinted with grey, top of head dusky washed with grey, behind ears a transverse black bar; eyes surrounded by a naked yellow membrane; back shining blackish green; beneath, and a collar round neck, pure white; quills black, the primaries towards middle white on inner vanes; and a broad band of the same colour extends along the wings; the two outermost tail feathers of each side white, the two middle ones entirely black, the intermediate ones black towards quills, white towards tips. Length $7\frac{1}{2}$ inches. Inhabits the country between Latakoo and the Tropic.

Genus MERULA. *Ray.*

Merula Libonyana. Above grey with a faint tint of green; chin rusty white with a band of brown stripes from each side of lower mandible; breast pale ochrey-grey, sides of belly and insides of shoulders an ochre colour; centre of belly, vent and under tail coverts pure white; wings and tail brown; inner vanes of primaries ochre coloured towards quills; the tips of the three outermost tail feathers white. Length 9 inches. Inhabits the country about and beyond Kurrichane.

Merula obscura. Above a dull grey-brown; chin and beginning of throat dull white, marked faintly with narrow brown stripes, rest of throat, breast, and flanks, grey-brown; centre of belly and vent an ochre colour; under tail coverts greenish brown, tipped with dull white, and some of them striped in the course of shafts with the same colour; wings and tail brown. Length 10 inches. Inhabits the country towards the sources of the Orange River.

Merula Litsipsirupa. Above grey, tinted with brown; sides of head and neck white, with an oval black ring behind each eye, and a line of black stripes from each side of lower mandible; beneath white, the breast and belly variegated with closely set oblong dark brown spots: quills and tail brown, the inner vanes of former, except near tips, buff. Length, 8 inches. Inhabits the country between the Orange River and the Tropic.

Genus CRATOPUS. *Jard.*

Cratopus Jardineii. Above greyish brown; the feathers of the head, and of the back and sides of neck, dark brown in the course of the shafts and at the tips white; beneath brownish grey the middle of each feather of chin, throat, breast, and centre of belly, clear white towards the point; wings and tail brown. Length 9 inches. Inhabits the banks of Rivers beyond Kurrichaine.

Sub-family SAXACOLINÆ. ?

Sub-genus DESSONORNIS. ?

Bill moderate, slightly curved towards the point, upper mandible notched; nostrils basal, above membranaceous; rictus slightly bristled; wings moderate, rounded, fourth, fifth, and sixth quills longest and nearly equal; tarsi moderate, acrotarsia indistinctly divided; claws moderately curved.

Dessonornis humeralis. Front and crown of head black, with a greyish tint; neck and interscapulars dull bluish grey; back and rump rufous; eyebrows white; sides of head and neck deep black; flanks, vent, and under tail coverts rufous yellow; throat, centre of breast, and belly, pure white; wings black; crossed by an oblique white stripe, two centre tail feathers black, the rest black towards tips, bright rufous towards quills. Length $6\frac{1}{2}$ inches. Inhabits the banks of the Marikwa, &c.

Sub-family SAXACOLINÆ.

Genus ERYTHROPYGIA.

Bill moderate, slender, curved, and compressed towards the point, upper mandible slightly notched; nostrils basal, above membranaceous; rictus slightly bristled; wings short, round, fourth and fifth quills longest; tail rounded; tarsi moderate, acrotarsia divided; claws moderately curved.

Erythropygia pectoralis. Top of head grey-brown; back dull brown; rump and tail coverts rufous; eyebrows, chin, and throat, white, the latter edged on each side with a black stripe; breast, belly, and vent, white, the former freely variegated by longitudinal dark brown stripes; flanks pale rufous; wing coverts brown and so tipped with white as to form two oblique bars across each wing; quills dark brown, outer vanes more or less distinctly edged with white; tail rounded, two centre feathers black towards quills, edged with dull rufous, lateral ones blackish, tipped with white. Length 6 inches. Inhabits the country between the Orange River and Kurrichaine.

Erythropygia Paena. Top of head grey-brown; back pale rufous brown; rump and tail coverts bright rufous; eyebrows white; chin and throat dull white, rest of under parts rusty white; quills brown, outer vanes edged towards bases with pale rufous; tail rounded, two centre feathers dark chesnut towards base, black towards tips, the lateral ones black towards quills, white towards tips. Length 6 inches. Inhabits the country between Latakoo and the Tropic.

Genus ALAUDA. *Auct.*

Alauda chuana. Colour above yellow rufous, with the middle of the feathers dark brown, and some of the
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interscapulars whitish towards tips; chin white; rest of under parts a pale cream colour, the lower portion of throat and anterior portion of breast with brown streaks; eyebrows white; quills brown edged with reddish white; tail slightly forked, dark brown, the two centre feathers edged and tipt with yellow rufous, the lateral ones tipt with white, and the outer vanes edged with pale tawny, except the outermost on each side which is white. Length $7\frac{1}{4}$ inches. Inhabits the country beyond Latakoo.

This will form the type of a Sub-genus in the group with naked nostrils.

Genus MIRAFA. *Horsf.*

Mirafra africana. Front and crown black-brown, feathers faintly edged with dull white; nape chesnut, the centres of feathers dark brown; eyebrows white; upper part of body pale rufous; with the centres of feathers black-brown; chin white; throat, breast, and belly, pale rufous yellow, the former mottled with brown stripes; outer and inner vanes of quills towards bases chesnut, elsewhere dark brown; tail dark brown, the outer vanes of the two outermost feathers white. Length 7 inches. Inhabits the eastern province of the colony and the country as far as Latakoo.

Mirafra africanoides. Head above, interscapulars, and back, rufous with dark brown streaks; eyebrows white; nape, and back and sides of neck, light rufous yellow with brown stripes; beneath rusty white, the chin and middle of belly nearly pure white, the anterior part of breast with a few brown stripes; quills chesnut towards bases, brown towards tips; tail dark brown, the outermost feather of each side edged with white, the two middle ones with pale rufous. Length 6 inches. Inhabits the eastern province of the colony and the country towards Latakoo.

Mirafra Sabota. Top of head dark brown, feathers margined with tawny yellow; eyebrows white; upper parts of body pale rufous, the middle of each feather dark brown; beneath rusty white, the lower part of throat tinted with pale rufous and spotted with brown; tail slightly forked, feathers dark brown margined with pale rufous, the outermost of each side with white. Length 5 inches. Inhabits the country between Latakoo and the Tropic.

Genus CERTHILAUDA. *Sw.*

Certhilauda semitorquata. Top of head and upper parts of body, rufous; feathers in the course of shafts dark brown; half collar on back of neck, immediately in front of interscapulars, obscure grey, streaked with brown; chin and throat white; breast and belly tawny white; the anterior part of former

and a portion of throat, marked with indistinct brown lines ; tail brown, the outer vanes of lateral feathers and both the vanes of the middle ones edged with pale rufous yellow. Length 8 inches. Inhabits the eastern province of the colony and the country immediately about the Orange River.

Genus EMBERIZA. *Lin.*

Emberiza Tahapisi. Head and throat black, the former with seven longitudinal white stripes ; one from base of mandible to centre of nape, and three on each side ; body above light brown, dashed with dark brown ; beneath light cinnamon brown ; tail dark brown, the outermost feather of each side tipped and edged with pale rufous. Length $5\frac{1}{4}$ inches. Inhabits the country towards the sources of Vaal River.

Emberiza Impetuani. Above light brown, the centres of feathers black-brown ; chin and throat rusty white ; breast, belly, vent, and under tail coverts, pale rufous ; quills brown, outer vanes of primaries narrowly edged with pale rufous, the secondaries broadly, with chestnut ; tail slightly forked, feathers dark brown, edged and tipped with rufous. Length $5\frac{1}{2}$ inches. Inhabits the country between the Nu Gariep and Tropic.

Some years ago I found specimens of this species inhabiting the arid districts of Little Namaqualand. It will belong to one of the aberrant *Subgenera*.

Sub-genus ZONOTRICHIA. *Sw.*

Zonotrichia africana. Above black-brown, feathers broadly margined with rufous ; chin white ; throat and breast pale rufous, marked with stripes of dark brown ; middle of belly white ; quills dark brown, outer edges towards base dark chestnut, inner edges pale rufous ; tail rounded, the two outermost feathers of each side white, the second with a brown stripe in the course of the shaft near the point, the intermediate ones dark brown, the two middle ones edged with light rufous. Length 5 inches. Lives amongst the grass, both to the north and south of Kurrichaine.

Genus. MEGALOTIS.* *Sw.*

Megalotis verticalis. Head, neck, and under parts, black-brown ; ears, top of head, nuchal collar, and a spot in front of each wing, white ; interscapulars and back grey-brown, the feathers towards quills brown ; tail slightly forked, the outermost feather of each side brown towards the base of the inner vane, elsewhere white. Length $4\frac{3}{4}$ inches. Inhabits the country on both sides of the Orange River.

* It is possible Mr. Swainson may have altered the title of this Genus, it having been previously employed by Illiger to designate a Sub-genus in the Mammalia.

Megalotis australis. Head above black-brown; interscapulars and back ferruginous dashed with dark brown; beneath black; quills and tail black-brown, the two centre feathers of the latter edged and tipped with light rufous. Length $4\frac{3}{4}$ inches. Inhabits the country along the Orange River, but extends farther south than the last described.

It is possible that both this and the last species may have been named and described, though I have not been successful in detecting them. Another species, (belonging to this interesting Genus), the *Fringilla otolucua*, of Temminck, known to inhabit Senegal, was discovered immediately beyond Kurrichaine, but only a very few specimens could be procured.

Genus LINARIA. *Auct.*

Linaria gularis. Top of head dark brown, feathers edged with white; eyebrows white; neck and upper parts grey-brown, clouded with darker tints; chin pure white; breast pale grey-brown; belly tawny white, darkish on the sides; quills and tail brown, the feathers edged with greenish white. Length $5\frac{1}{2}$ inches. Inhabits the colony and country as far as Latakoo—*rare*.

Linaria atrogularis. Above grey-brown, the centres of feathers dark brown; rump sulphur yellow; chin and throat black; breast, belly, and vent, rusty white; wings brown, the tips of the quills and the inner edges of inner vanes towards bases white, the outer edges golden green; tail slightly forked, dark brown, with the tips and more or less of the inner vanes of feathers white. Length $4\frac{1}{2}$ inches. Inhabits the country about and beyond Kurrichaine.

Genus ESTRELLA, *Sw.*

Estrella Lipiniana. Top of head, neck, and interscapulars, tinted with crimson; back, rump, and upper tail coverts, crimson; hinder part of breast and belly dull crimson; sides of head, chin, under tail coverts, and tail, black; quills ashy brown; wing coverts and scapulars grey, closely banded with brown. Length $4\frac{1}{4}$ inches. Inhabits the country to the north and east of Kurrichaine.

Estrella Squamifrons. Top of head, wing coverts, and tail, black, each feather margined with white; neck and back rusty grey; before eye a black spot; chin black, continued behind into two divergent stripes; under parts dull white. Length 4 inches. Inhabits South Africa.

I feel considerable hesitation in assuming this bird to be yet undescribed, it being not very uncommon in the more remote parts of the colony. I am not, however, able to identify it with any species mentioned in the translation of the Animal Kingdom—it certainly cannot be *Fringilla frontalis*, of Vieillot. The character of its bill, in particular, removes it from the typical species of the genus, and this, in conjunction with other peculiarities, may point out for it a more appropriate position.

Genus PYRGITA, *Cuv.*

Pyrgita Motitensis. Top of head and back of neck grey; eyebrows, sides of neck, and back, chesnut; the interscapulars dashed with dark black-brown; eyeband, chin, and throat, black; cheeks white; breast and belly rusty white. Length $6\frac{1}{4}$ inches. Inhabits the country about Old Latakoo.

Pyrgita diffusa. Head and neck dull rusty grey; interscapulars brown, washed with grey; wing coverts, back, and rump, dark chesnut brown, some of the coverts tipped with white, which form one or two oblique bands on wings; chin, throat, breast, and flanks, pale grey brown; belly, vent, and under tail coverts, rusty white; quills and tail dark brown. Length $5\frac{3}{4}$ inches. Inhabits the country between the Orange River and the Tropic.

Genus CRITHAGRA. *Sw.*

Crithagra Selbyi. Upper parts brown-grey; dashed longitudinally with a dark brown; rump greenish yellow; eyebrows, chin, throat, middle of belly vent, and under tail coverts, white; breast and sides of belly brown-grey; quills and tail brown. Length 6 inches. Inhabits the colony and country as far as Kurrichaine

This, which is a distinct species, has been figured by Sir Wm. Jardine and Mr. Selby as the young of *Crithagra sulphurata*.

Genus EUPLECTES. *Sw.*

Euplectes taha. The upper part of the head, the interscapulars, back, rump, upper tail coverts, and vent, bright yellow; sides of the head, neck, breast, and belly, velvet black; wings and tail brown; under tail coverts dirty white. Length $4\frac{1}{4}$ inches. Inhabits the country north and east of Kurrichaine.

Genus PLOCEUS. *Cuv.*

Ploceus Tahatali. Above golden green, the feathers of top of head, back of neck, and interscapulars, dark brown in the course of the shafts; beneath bright yellow, here and there of an orange tint; quills brown, outer vanes till near tips edged with golden green; tail olive brown; feathers edged with greenish yellow; greater wing coverts and scapulars brown, margined with yellow or dull white. Length $5\frac{3}{4}$ inches. Found between the Orange River and the Tropic.

Ploceus dubius. Above dark brown, the feathers broadly margined with pale rusty brown; eyebrows yellow-white; chin, throat, middle of belly, vent, and under tail coverts, dull white; breast and sides of belly rusty white, variegated with longitudinal brown lines; quills and tail dark brown, edged

with rusty white. Length $4\frac{3}{4}$ inches. Inhabits the country beyond Kurrichaine.

This may belong to the Genus *Euplectes*. On examining the first specimen obtained I was disposed to regard it as the *Euplectes Taha*, in its winter plumage, which impression was subsequently removed on comparing the two birds and hearing the statements of the natives regarding their nests. The *Euplectes Taha* builds amongst reeds, the *Ploceus dubius* upon trees.

Sub-genus PLOCEPASSER.*

Bill conical, pointed; culmen arched and entering between feathers of forehead; edges of upper mandible slightly waved; nostrils basal, rounded, and open; rictus slightly bristled; wings rather long, third and fourth quills equal; tail slightly rounded; tarsi moderate, outer and inner toes of equal length; claws slightly curved and rather blunt.

Plocepasser Mahali. Upper part of head, and a longitudinal stripe on each side of neck, black-brown; eyebrows white; sides of head brown; sides of neck, interscapulars, and back, light brown; rump, upper and under tail coverts, chin, and throat, pure white; breast and belly dull white, faintly clouded with brown; wing coverts and scapulars dark brown, the former tipped with white so as to form two oblique lines of that colour on the wings; tail black-brown tipped with white. Length $6\frac{1}{2}$ inches. Inhabits the country between the Orange River and the Tropic.

Genus LOXIA. Auct.

Loxia Lathamii. Above brown, the interscapulars and wing coverts edged and tipped with pale rufous or rusty white; chin, middle of belly, vent, and under tail coverts, white; breast and sides of belly rusty white, the latter and sides of breast faintly clouded with brown. Length 4 inches. Inhabits the country near to and beyond Kurrichaine.

I have not ventured to assign this species to a Sub-genus, as the different forms cannot here be ascertained.

Sub-family AGELAINÆ. Sw.

Genus BUBALORNIS.

Bill elongated, pointed, slightly compressed towards the point; culmen arched and entering between the feathers of forehead; nostrils basal subcylindrical and open; rictus slightly bristled; wings rounded, third fourth and fifth quills equal; tail moderate, rounded; tarsi and acrotarsia divided, the divisions of latter in part obsolete; outer and inner toes equal; claws short, slightly curved, and blunt.

* The *Ploceus superciliosus*, of Ruppel, may perhaps belong to this group.

Bubalornis niger. Shining black; flanks and sides of breast slightly variegated with white; inner vanes of quills white towards their bases, and the outer vanes of several broadly edged with the same colour; bill red. Length 8 inches. Inhabits the country about Kurrichaine, and is generally found accompanying herds of Buffaloes.

Sub-family LAMPROTORNINÆ.

Sub-genus MEGALOPTERUS.

Bill moderate, nearly straight; culmen gently curved towards the point and entering slightly between the feathers of forehead, upper mandible slightly notched; nostrils basal, above membranaceous; rictus slightly bristled; wings large, fourth or fifth quill longest, the second, third, fourth, and sometimes the fifth, obliquely truncated at the points, each with a projecting corner at the inner angle; tail moderately or very much graduated; tarsi long, acrotarsia divided; claws moderately curved.

Megalopterus australis. Plumage a bright splendent green; ears violet purple, with a half collar of the same colour on the back of the neck immediately in front of interscapulars; belly green-blue with a steel gloss; tail graduated, the outermost feather of each side three inches shorter than the two centre ones. Length 13 inches. Inhabits the country beyond Kurrichaine.

As specimens of this bird have been sent to Europe, it is possible that it may have been described, though I cannot recognise it in any of the publications within reach. It doubtless belongs to the same group as the *Turdus æneus*, of Senegal. When flying, the wings appear out of proportion to the body, and give the appearance of a size to the bird which in reality it does not possess. In the movement of the wings there is also a marked difference between it and the smaller species of the genus.

Fam. CORVIDÆ, Sw.

Genus EUROCEPHALUS.

Bill short, slightly arched, broad at base, compressed towards point, the upper mandible slightly notched; nostrils basal and partly covered by the incumbent feathers; rictus slightly bristled; wings moderate pointed, third quill longest; tail slightly rounded; tarsi short and like the acrotarsia divided; outer toe longer than the inner one; claws slightly curved.

Eurocephalus anguitimens. Front crown and middle of neck above white; ears black; sides of neck behind ears dull brown; interscapulars, back, rump, and upper tail coverts, pale ashy brown; wing coverts, quills, and tail, dark brown; throat, breast, and anterior part of belly, white; posterior part of

belly, vent, and under tail coverts, rusty wood brown. Length $8\frac{1}{2}$ inches. Inhabits the country between Latakoo and the Tropic.

When an opportunity occurs of comparing this bird with the various forms of the *Corvidæ*, its true place may be found in another family, and the resemblances, particularly as regards its habits, may be those of analogy and not affinity.

Genus CINNYRIS. *Cuv.*

Cinnyris Mariquensis. Head, neck, and upper part of body, green gold, with a splendid coppery gloss; breast crimson, edged in front by a narrow steel blue band; wings brown; belly and tail black. Length $4\frac{1}{2}$ inches. Inhabits the country north of Kurrichaine.

Cinnyris talatula. Head, neck, and upper parts of body, green gold; chin inclined to purple; anterior part of breast deep violet blue, with a bright purple gloss; belly white; under each wing an oblong sulphur yellow spot; wings brown; tail black, the outer vanes of feathers edged with green gold. Length 4 inches. Inhabits the country between the Orange River and Kurrichaine.

Genus CHRYSOPTILUS. *Sw.*

Chrysoptilus Bennettii. Top of head, and a longitudinal band behind gape, crimson red; upper parts of body green-brown, barred irregularly with pale greenish yellow; cheeks, chin, and eyebrows, yellowish white; beneath pale golden yellow, breast and belly variegated with rounded black-brown spots; tail indistinctly barred brown and golden yellow, the tips of feathers black brown. Length $7\frac{1}{2}$ inches. Inhabits the country about and beyond Kurrichaine.

Chrysoptilus Abingoni. Top of head, and a longitudinal band behind gape, a dark slate colour, sprinkled with red; elongated feathers of hind head bright scarlet; body above olive brown and golden green, with one or more pale yellow diamond shaped spots on each feather; chin and throat white, with longitudinal black stripes; breast and belly straw yellow, with similar stripes; tail olive brown, with dull golden yellow bars, tips of feathers dull golden yellow. Length $7\frac{1}{2}$ inches. Occurs in the same localities with the last.

Specimens of this species were obtained near Port Natal in 1832.

Sub-family BUCCONINÆ. *Sw.*

Sub-genus POLYSTICTE.

Bill compressed, pointed, the edges of upper mandible towards base dilated, culmen arched; nostrils basal, round, and open; rictus slightly bristled; wings short, rounded, the fourth and

fifth quills rather longest; tail moderate, rounded; tarsi and acrotarsia divided, two outermost toes nearly of equal length.

Polysticte Quopopa. Crested, crest, back of neck, interscapulars, wing coverts, and a broad crescent on anterior part of breast, black-blue, with a shining metallic gloss; the interscapulars and coverts broadly tipped with white, the crescent on breast variegated with pale rose coloured spots; front, crown, sides of head, chin, and anterior part of belly, sulphur yellow, variegated with blood red spots or stripes; back, hinder portion of belly, vent, and under tail coverts, greenish yellow; upper wing coverts crimson; quills brown, outer vanes barred with white; tail black-blue, both vanes partially barred with white and broadly tipped with the same colour. Length $8\frac{1}{2}$ inches. Inhabits from Kurrichaine to the Tropic.

Family MUSOPHAGIDÆ. Sw.

Genus PHIMUS. Wagl.

Sub-genus COLIPHIMUS.

Bill short, compressed, margin of upper mandible obtusely angulated and notched near tip, culmen strongly arched from base; nostrils oblong, open; wings moderate, pointed, fifth quill longest, fourth and sixth equal; tail long, spreading, slightly rounded.

Coliphimus concolor. Forehead surmounted by a large and pointed crest of decomposed feathers of the same dull grey colour as the rest of the body; quills brown, glossed with coppery green; tail rounded, two centre feathers brown, lateral ones blackish green. Length $17\frac{1}{2}$ inches. Inhabits the country from Kurrichaine to the Tropic.

Genus PERDIX, Lin.

Perdix Swainsonii. Space round eyes, chin, and part of throat, bare and deep red; neck black brown, feathers edged with white; interscapulars rusty grey, each with a brown stripe in the course of the shaft; back, rump, and upper tail coverts finely variegated, yellowish white and brown; beneath rusty grey, each feather with a brown stripe in the course of the shaft, and the belly with dashes of deep chesnut; tail light brown, with oblique, waved, dark brown lines. Length 14 inches. Inhabits the banks of Rivers beyond Kurrichaine.

Perdix Lechoho. Top of head rusty brown, neck mottled black-brown and white; back and tail pale rusty yellow, tinted with grey, and closely mottled with brown in waved irregular lines, many of the feathers towards their centres with a dark brown stripe; beneath irregularly spotted dark

brown and white, the latter the prevailing colour on the belly. Length $11\frac{1}{2}$ inches. Inhabits the banks of the Marikwa and Limpopo Rivers.

This species I also found on the banks of Rivers near Port Natal.

Perdix Levalliantoides. Top of head black-brown, feathers edged with pale rufous; back of neck chesnut with black and white spots; back a dark, bright, red-brown, variegated with grey, pale rufous and black, each feather with a rusty white stripe in the course of shaft, which stripe is generally edged on each side by black; over and under each eye a mottled black and white band, each of which extends towards the middle of the throat, where they unite and form a large patch of the same character; breast and belly varied dark chesnut brown and pale buff, the latter colour is bounded partially with black or black-brown; chin white. Length $11\frac{3}{4}$ inches. Inhabits the country towards sources of Orange River.

Perdix Sephaena. Top of head grey brown; neck chesnut, the feathers edged with white; back pale chesnut, behind inclining to brown, the feathers with a whitish stripe in the course of the shafts; chin, eyebrows, and a stripe under each eye white; throat and breast yellow-white, each feather with a large, somewhat triangular, bright logwood coloured spot towards the point; belly tawny yellow, finely mottled with white and brown irregular lines; under tail coverts buff; quills and tail dark brown. Length 12 inches. Inhabits the banks of the Marikwa and Limpopo Rivers.

Perdix Coqui. Top of head chesnut, back and sides of neck rufous yellow; a black stripe over and another below each eye the former ending on side of neck, the latter uniting in front of the neck with the one of the opposite side; chin rusty white; body above pale rufous, feathers barred or irregularly spotted with deep brown, and each with a whitish line in the course of the shaft; breast a pale cinnamon colour; belly with broad black and yellowish white bars. Length 9 inches. Inhabits dry flats beyond Kurrichaine.

The two first species of this Genus resemble in their plumage and manners the Francolins; the three last the true Partridges.

GENUS ORTYGIS. III.

Ortygis Lepurana. Top of head brown, with a narrow whitish stripe from bill to nape; back variegated fulvous and brown-black, the variegations in the form of waved and arched lines, on the middle of each feather; the edges of feathers greyish; chin and throat dull white; centre of breast with a large pale cinnamon blotch; sides of breast pale buff, with

arrow shaped, blackish spots; belly white, flanks tinted with pale rufous yellow. Length 5 inches. Inhabits the country north of Kurrichaine.

Genus PTEROCLES. *Temm.*

Pterocles variegatus, Burch, (*male*). Front black; eyebrows, sides of head, and chin, light grey; general character of the plumage given by Burchell* in his description of the female. Inhabits the country between Latakoo and the Tropic.

Pterocles gutturalis. Top of head brown, tinted with honey yellow; nape and sides of neck of the latter colour; back, shaded rusty grey, lavender purple, and honey yellow, the feathers towards quills blackish; eyebrows white; space between eye and bill black; chin and part of throat straw yellow, behind the latter a half collar of black; belly, vent, and under tail coverts, deep reddish brown; wing coverts pale gall-stone yellow. Length $11\frac{1}{4}$ inches. Inhabits the country to the north and south of Kurrichaine.

Genus OTIS. *Lin.*

Otis ruficrista. Head above rusty grey-blue; eyebrows, space in front of eyes, and the occiput, rusty white, mottled with brown, the latter with a pale chesnut crest of fine silky feathers; interscapulars, scapulars, and the lesser wing coverts, variegated pale rufous and brown, each feather with one or more arrow-shaped, buff coloured spots; chin white, with a longitudinal black stripe; neck blue-grey, above freckled with white; ears, and a spot in front of each shoulder, white; quills dark black-brown, some of them partially crossed by buff coloured bands; tail rounded, centre feathers with zigzag black and white lines, lateral ones green-black towards quills, with waved white lines. Length 20 inches. Inhabits the country between Latakoo and the Tropic.

Otis Afraoides. Crown brown, clouded with grey, and edged with white; ears, bar in front of interscapulars, shoulders, and a longitudinal band on each wing, white; neck and under parts shining black; interscapulars and scapulars variegated with rufous yellow and black transverse lines; wing feathers black, the inner vanes of the primaries and the outer vanes of some of the secondaries, white towards quills; tail rounded, the middle feathers finely barred black and rufous yellow, the lateral ones blue-grey, with waved black lines and a broad black bar towards points, all the feathers tipped with white. Length 19 inches. Inhabits the country between the Sneuwbergen and Kurrichaine.

* Travels in South Africa, vol. 2, p. 345.

Family ARDIADÆ.

Sub-genus CANCROPHAGUS. *Briss.*

Cancrophagus gutturalis. Above a dark slate colour; throat white with a deep black-blue central line, widening as it descends; middle of breast rusty white dashed with black-blue; belly pale rufous, with broad longitudinal slate coloured stripes; wings and tail of the same colour as back, only rather darker. Length $11\frac{1}{2}$ inches. Shot between the Black and Vaal Rivers—*rare*.

Genus CARBO. *Meyer.*

Carbo Africanoides. Head, back, and sides of neck, dull brown, clouded with black-green; interscapulars dark brown, margined with white; back, rump, and point of shoulders, black-green; wing coverts and scapulars hoary blue-grey, tipped with white, and crossed near extremities by a black bar, some of them also finely margined with black; throat, breast, and belly, dull white, the first clouded with brown; sides of breast, flanks, thighs, and under tail coverts, green-black; quills greenish brown; tail greenish black. Length 20 inches. Shot near New Latakoo.

This may perhaps prove to be the *Pelecanus Africanus*, at a certain age.

Note.—The names given by the Natives to the objects above described, I have adopted as the trivial ones, whenever they would readily admit of such application, under an idea that they are not so calculated to confuse and mislead as those formed with a view to indicate certain assumed peculiarities in the individual objects. In the proportion in which we are enabled to extend the number of species, in the same proportion do we find the appearances which at one stage of the science were considered peculiar to one species to be common to many, therefore until some form of nomenclature be invented, which is not calculated to confuse and mislead by suggesting some such character or appearance in an object, it would perhaps be better to avoid, as much as possible, any reference to such in the name. Every Naturalist must have found the difficulty of discovering suitable names for species, and yet no one has endeavoured to devise a system of nomenclature, which could be carried to any extent without difficulty, and be free from ambiguity.

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